NAVIGATING 1:1 PERSONALIZED TECHNOLOGY INITIATIVES IN INDIANA K-12 PUBLIC SCHOOLS: TECHNOLOGY DIRECTORS' PERSPECTIVES ON TECHNOLOGY USAGE POLICIES IN RURAL SCHOOL DISTRICTS

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NAVIGATING 1:1 PERSONALIZED TECHNOLOGY INITIATIVES IN INDIANA K-12 PUBLIC SCHOOLS: TECHNOLOGY DIRECTORS' PERSPECTIVES ON TECHNOLOGY USAGE POLICIES IN RURAL SCHOOL DISTRICTS

The purpose of this study was to research and analyze the policy trends that exist in K-12, Indiana school districts with a personalized technology initiative in place. Because technology leaders in K-12 schools are generally responsible for all facets of technology initiatives within their district, this study further explored technology directors' perceptions about these policies and their rationale for choosing one policy over another. More specifically, this study addressed the following research questions: (1) How did technology directors choose their type of technology usage policy and what was their purpose for selecting that type of policy?; (2) What are some of the essential conditions to support technology usage policies in schools and what are some of the constraints of those policies?; and (3) What are the perceptions that technology directors have about the ethical and legal implications of their technology usage policies within the context of implementing a personalized 1:1 technology initiative in their district? To best address the ethical, policy, and legal concerns surrounding the adoption of technology usage policies in rural, K-12 public school districts with a 1:1 technology initiative in Indiana, a qualitative study consisting of interviews of technology directors and content analyses of technology usage policies was selected. Key findings indicated that acceptable use policies (AUPs) were the most common type of technology usage policies among participants in this study. While technology usage polices were present in all school districts in this study, technology directors believed their

effectiveness can be limited by a myriad of factors, including school culture, attitudes of the technology directors, expectations that are set (or lack thereof), educational opportunities to teach the policies, and enforcement of the policies. Technology directors also expressed many more legal concerns or challenges than moral or ethical challenges. Findings from this study indicated a pressing need for more professional development for school leaders about legal issues related to technology.

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Chapter One: Research Overview

1.1: Introduction

In today's era of competition for funding, resources, students, and higher academic performance, schools across the United States have been forced to explore ways to make their school districts more marketable. One such way that schools might accomplish this is through the offering of advanced access to technology in the classroom. In support of this, Project Tomorrow's annual Speak Up Survey in 2017 found that "two-thirds of parents in all types of communities (urban, rural, and suburban) say that effective use of technology within the classroom provides a significant way for their child to develop college and career ready skills" (Project Tomorrow, 2017, p.1). School officials might also seek out increased technology in their classrooms to create more engaging curriculums (Rao, 2013) or to help equal the playing field in under resourced school districts (American Libraries Association, 2011). Additionally, as new learning models, such as blended or flipped learning, continue to become increasingly popular in K-12 schools, school district leaders are looking to digital, personalized technology initiatives to support these kinds of curricular methods (Blackboard, 2018). Some popular examples of technology initiatives that have been implemented in K-12 educational environments are: BYOD (Bring Your Own Device), 1:1 implementation (each student has a school-issued device) or classroom sets of technology (i.e. iPad, Laptop, or Tablet carts in each classroom for shared use).

According to a survey conducted by the Indiana Department of Education's (IDOE) Department of eLearning during the 2014-2015 school year, 151 school districts self-reported that they already had a 1:1 technology initiative in place across at least one grade level (Indiana Department of Education, 2015). A review of the Indiana School Technology Plans for 2018 revealed the following data about school districts across the state: 41% of all school districts (up

from 35% in 2017) are 1:1 at all grade levels, 26% of all school districts (same as in 2017) are 1:1 at most grade levels, 13% of all school districts (down from 15% in 2017) are 1:1 in some grade levels, 6% of all school districts (same as in 2017) are planning to launch a 1:1 initiative during the next school year, 6% of all school districts (down from 10% in 2017) are studying or considering implementing a 1:1 initiative, and 7% of all school districts (down from 8% in 2017) have no current plans to go 1:1 (Indiana Department of Education, 2017 and Indiana Department of Education, 2018).

Of the school corporations who submitted technology plans in 2018, 14.4% were from large cities, 2.3% were from mid-size cities, 7.8% were from small cities, 23.7% were from distant rural areas, 14.6% were from fringe rural areas, 1.0% were from remote rural areas, 13.6% were from large suburban areas, 1.0% were from mid-size suburban areas, 1.26% were from small suburban areas, 12.1% were from distant town areas, 3.8% were from fringe town areas, 0.5% were from remote town areas, and 4% did not indicate what kind of areas they were from (Indiana Department of Education, 2018). Figure 1.1 and Figure 1.2 below show a summary of districts' 1:1 status and compare their status over the past three years from 2016-2018 (Indiana Department of Education, 2017 and Indiana Department of Education, 2018). While the types of devices vary widely across the state, IDOE reports that most 1:1 schools across Indiana have selected one of the following devices: iPads, Chromebooks, Netbooks, Laptops, or Tablets (Indiana Department of Education, 2015). As a viable alternative to school-issued devices, a few school districts across Indiana have opted to achieve a 1:1 technology distribution by implementing a BYOD initiative (Indiana Department of Education, 2017). In other words, it is important to note that the types of technology used and the way in which the technology is integrated into the learning environment varies widely from school district to school district.

Figure 1.1: 2018 District 1:1 Status (Indiana Department of Education, 2018)

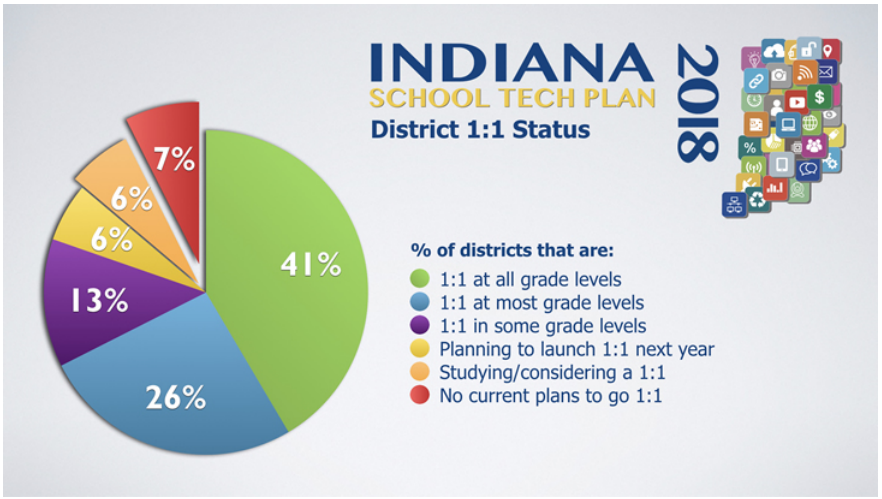
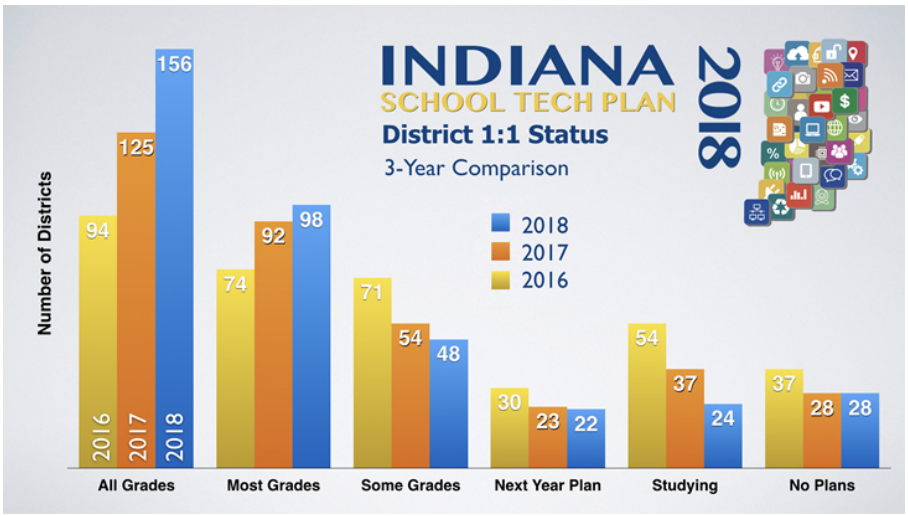


Figure 1.2: Three-Year Comparison of Districts' 1:1 Status (Indiana Department of Education, 2018)



There is a wealth of research that suggests that regular access to technology in learning environments is important for equipping students with essential Information and Communication Technology (ICT) skills that will be central to their success after graduating from secondary educational institutions (Lawson & Comber, 2000). In particular, this dissertation focuses on rural schools because they generally report increased difficulty with providing such access to technology for their students due to a myriad of factors, including location, socioeconomic status, and

size (Bouck, 2004; Howley, Wood, & Hough, 2011). Although technology use is important, merely providing access to technology for students and teachers will not improve the quality of the teaching and learning that occurs within a school or classroom (O'Brien et. al., 2006). In fact, Collins (2001) clearly articulates this in his book, *Good to Great*, where he writes that "technology alone never holds the key to success. When used right, technology is an essential driver in accelerating forward momentum" (p. 159). Teachers and administrators must also work to empower students to engage in meaningful and authentic learning opportunities, while simultaneously allowing them to learn and refine their ICT skills.

A significant difference exists between merely using technology in classrooms and teaching effectively with technology in the classroom to enhance learning. When integrated effectively, technology has the potential to become an essential part of the learning process (Rao, 2013). When technology becomes a routine and seamless part of the classroom environment, students have the opportunity to engage in learning activities that would otherwise be impossible (Rao, 2013). Now more than ever, teachers have access to technology tools to engage students, facilitate collaboration inside and outside of the classroom, encourage higher order thinking, create and develop new thinking processes, and demonstrate creativity (Rao, 2013). Despite greater access to technology, "a large gap remains between the relatively modest impact that technology has had on education, particularly in grades K-12, and the transformative impact that technology has had on other parts of our lives" (Mesecar, 2015, p. 6). Recognizing this gap, many schools are now using federal legislation such as the Every Student Succeeds Act (ESSA) to create such innovative and transformative educational experiences for their students through personalized 1:1 initiatives (ESSA, 2018; Mesecar, 2015).

Recognizing that the goal of 1:1 technology initiatives is to create this kind of rich learning experience for all children by harnessing the power of technology to engage learners and differentiate instruction, this dissertation is focused around one foundational piece that all schools put in place when implementing a 1:1 technology initiative: technology usage policies (e.g., Responsible Use Policy, Acceptable Use Policy, or Empowered Use Policy). Although technology usage policies address a wide variety of issues for school districts, below are the three most common functions of technology usage policies (to be discussed in detail in Chapter 2):

- Technology policies and procedures help schools navigate the deployment, usage, and management of devices and allow school leaders to provide a framework for establishing a positive school culture that is conducive to learning with technology (Flowers & Rakes, 2000).
- Safety is a primary concern for educational leaders and the personalized technology movement in schools has necessitated the inclusion of technology usage policies and procedures, aimed at keeping students safe online while also giving them greater access to the internet (Murphy, 2012).
- These policies offer school districts that are applying for federal e-rate funding an option for complying with the requirements set forth in the Children and Internet Privacy Act (CIPA) (Common Sense Media, 2014).

1.2: Statement of the Issues

This study examines technology directors' perspectives about technology usage policies and the policy trends that are occurring throughout the state of Indiana in rural, K-12 public school districts that have adopted personalized technology initiatives. With these policies, there are many concerns that might surface as technology directors select and implement a technology

usage policy. In order to set the context, the following issues will be briefly discussed below: (1) understanding the differences between an Acceptable Use Policy (AUP), a Responsible Use Policy (RUP), and an Empowered Use Policy (EUP); (2) aligning the selected policy to the overall vision of the school district; (3) understanding the constraints of technology usage policies; and (4) balancing competing values.

Understanding the differences. Before delving into a discussion of some of the major issues, it is imperative that the distinctions between the three main types of technology usage policies are defined: AUP, RUP, and EUP.

- AUP: A school district's Acceptable Use Policy (AUP) can be defined as "a collection of rules established by the owner or manager of a network, website, or computer system to restrict the ways in which it is accessed and used" (Murphy, 2012, p. 1). Instead of teaching users how to use technology effectively, safely, and efficiently, AUPs are often written to restrict usage and serve as a list of actions that are allowed and disallowed. In fact, AUPs are characterized by their autocratic demand for compliance and their contractually binding language (Murphy, 2012). It is important to note that AUPs focus both on prohibiting certain behaviors and promoting other ways to use technology throughout the school day (Common Sense Media, 2014).
- RUP: A school district's Responsible Use Policy (RUP) is similar in purpose to an AUP in that it attempts to establish guidelines for users' technology usage. In contrast to an AUP, a RUP sets a more positive tone for technology usage within a school district by focusing on learning activities with technology, and teaching students how to be good digital citizens (Murphy, 2012). Also distinct from AUPs, RUPs focus more on teaching

meaningful, responsible, and safe usage of technology by all members of the school community (Murphy, 2012). It is also important to note that most RUPs are developed out of an already existing AUP.

- EUP: Empowered Use Policies (EUPs) are the newest educational technology policies to be implemented by K-12 school districts. Like RUPs, EUPs are often developed out of an existing RUP or AUP. EUPs most significantly differ from RUPs in terms of defining how users should interact with technology. While RUPs are focusing on educating users about how to use technology responsibly, EUPs offer more freedom to the user, suggesting that the user should be empowered to use technology creatively to engage in the learning process (McLeod, 2014). With RUPs, there is still some element of trying to define how users should interact educationally with technology. EUPs abandon that concept altogether, acknowledging that the user should be equipped with the skills necessary to feel empowered to use the technology as they deem necessary for educational purposes (McLeod, 2014). Like RUPs, EUPs also provide for teaching responsible and safe behavior while online.

Alignment to vision. One possible issue that district technology leaders might consider in adopting an AUP, RUP, or EUP is determining how that policy will align with the overall vision of the school district. With any personalized technology initiative, it is imperative to identify the goals and purpose of the initiative prior to implementation. When these goals are clearly established, it makes sense to align the policies and procedures to the overall vision of the school district (Murphy, 2012). The type of technology usage policy that is adopted will likely reflect the vision that the district has for teaching and learning with technology (Murphy, 2012). Conflicts

may occur when a technology usage policy does not align to the overall vision of the school district.

Constraints of policies. Although AUPs, RUPs, and EUPs provide different approaches to controlling technology usage in K-12 learning environments, such policies are inherently limited by how they are practically enforced (Common Sense Media, 2014). As with any policy, a district's technology usage policy is useless without strict enforcement and education about its applications to the end user (Flowers & Rakes, 2000). Furthermore, technology leaders must be careful to select clear, appropriate language in the creation of their technology usage policies so that their policies enhance the teaching and learning in classrooms instead of impeding it (Flowers & Rakes, 2000).

Competing values. Another major issue for technology directors is how to provide students with a greater level of access to meaningful learning opportunities afforded through technology while simultaneously protecting them from harmful content or loss of instructional time (Bosco, 2013). Riker Danzig (2000) discussed the challenges associated with taking precautions to protect students without inadvertently and simultaneously infringing on students' privacy and free speech protections that are afforded by the First Amendment. In an effort to protect students from inappropriate content, school districts often use software that uses set words and phrases to block out content that is not appropriate for educational purposes; however, in doing so, school districts might unintentionally deny students access to educationally relevant information and ideas simply because it is unpopular or associated with one of the set words or phrases that would trigger software to censor the material, thereby limiting the educational resources available to students (Riker Danzig, 2000).

Furthermore, Lawson and Comber (2000) identified this phenomenon of competing values by describing the "moral panic" of the 1990s – the decade within which the Internet was first introduced (p. 274). Citing Kenway (1996), Lawson and Comber note that approaches to the Internet are either framed as utopian by "seeing the information superhighway as a potentially liberating medium in which 'information wants to be free'", or dystopian by "focusing on the potential for control and surveillance represented by a global network" (p. 274). Although this dilemma between protection and open access originated in the 1990s, it is still a primary concern for educational institutions across the world (Lawson & Comber, 2000). With so many important considerations and values held simultaneously, the decision to select one policy type over another undoubtedly is reflective of the values and ranking of priorities within each school district. Certainly, it seems as though the decision-making process of crafting technology usage policies is more complex than a simple weighing of pros and cons.

1.3: Purpose of the Study

The overarching goal of this study was to research and analyze the different types of technology usage policies that are currently in place in rural, Indiana K-12 school districts with a personalized technology initiative in place. Because technology directors in K-12 schools are generally responsible for all facets of technology initiatives within their district, this study was designed to further explore technology directors' perceptions about these policies and their purpose for choosing one policy over another. Additionally, I conducted this study to learn more about the moral, ethical and legal challenges that technology directors are concerned with regarding technology usage policies.

The findings from this study were intended to help inform other technology leaders who are considering implementing a new technology usage policy in their districts, or who plan to revise their existing policies in the future. With the information from this study, technology leaders can learn from the experiences, attitudes, and insights of other technology directors in rural, K-12 school districts who have implemented technology usage policies for their 1:1 technology initiatives. Furthermore, this study's findings were identified to help educational technology leaders decide whether an Acceptable Use Policy (AUP), Responsible Use Policy (RUP), or Empowered Use Policy (EUP) is most appropriate for their specific school districts.

1.4: Research Questions

In order to further understand the importance of policies in establishing a successful 1:1 learning environment, the current study focused on the following research questions:

1. How did technology directors choose their type of technology usage policy and what was their purpose for selecting that type of policy?
2. What are some of the essential conditions to support technology usage policies in schools and what are some of the constraints of those policies?
3. What are the perceptions that technology directors have about the ethical and legal implications of their technology usage policies within the context of implementing a personalized 1:1 technology initiative in their districts?

1.5: Significance of the Study

Due to the rapidly changing nature of technology and innovation and the increasing number of students with access to a mobile device, schools are increasingly being expected to keep pace with current trends in teaching and learning through instructional technology (Bosco, 2013).

As such, policies such as AUP's, RUP's, and EUP's play a critical role in providing a framework of expectations, procedures, and attitudes that are central to supporting the kind of 21st Century teaching and learning that is being demanded by stakeholders (Bosco, 2013). Due to the important role that such policies play in organizing technology initiatives, this study is both timely and pertinent to K-12 educational practitioners who are considering the implementation of a new personalized technology initiative or expanding an existing technology initiative.

There is an abundance of research dedicated to examining the importance of reforming our systems of education to meet the needs of all students through 21st century skills, differentiation, and increased student engagement - with and without technology (Partnership for 21st Century Skills, 2011). The vast majority of this research is centered on theory or professional development efforts of educators, most of which is not peer-reviewed. Additionally, there are a handful of studies that have been done to identify elements of technology usage policies. Of these aforementioned studies, most of the research is within the international context, and only one study focused on analyzing acceptable use policies in the United States (Flowers & Rakes, 2000). By reading the existing studies, I identified a significant gap in the body of research with regards to examining the different technology policies themselves. Furthermore, there is also a lack of research that represents technology leaders' perspectives on technology integration and 1:1 initiative implementations in K-12 schools. As such, the current study was designed to provide insight into both of these gaps in the literature.

Throughout the existing body of literature, rural schools are underrepresented in studies focused on technology in general (Barter, 2013; Blackboard, 2018; Bouck, 2004). As such, the current study was designed to address this gap in the literature. According to the National Center

for Education Statistics (NCES)'s urban-centric classification system (2006), a rural school district is a school district that does not lie inside an urbanized area (50,000+ people) or urban cluster (2,500-50,000 people) (National Center for Education Statistics, 2006). More specifically, rural areas can be classified in one of the following ways:

- Fringe - "census-defined rural territory that is less than or equal to 5 miles from an urbanized area, as well as rural territory that is less than or equal to 2.5 miles from an urban cluster" (Office of Management and Budget, 2000).
- Distant - "census-defined rural territory that is more than 5 miles but less than or equal to 25 miles from an urbanized area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an urban cluster" (Office of Management and Budget, 2000).
- Remote - "census-defined rural territory that is more than 25 miles from an urbanized area and is also more than 10 miles from an urban cluster" (Office of Management and Budget, 2000).

In light of decreased funding and increased demand for accountability from stakeholders in the community, school districts no longer simply invest in initiatives without studying the expected/potential return on investment (ROI) from these new initiatives. Thus, the current study explored some of the current trends in establishing policies for technology initiatives, while also providing guidance to decision-makers in districts that are considering implementing a technology usage policy in their 1:1 initiative. Because these initiatives are extremely costly, this study is adding to the body of existing literature to help school districts rationalize their decision to move forward with such an initiative to their stakeholders.

Furthermore, policymakers, researchers, educators, students, and other stakeholders should be interested in learning more about the different kinds of policy options that are available to best support their vision and mission for their technology initiatives. This study was designed to provide a unique perspective on the potential advantages and disadvantages of selecting an AUP, RUP, or EUP, as identified by the technology leaders themselves. The discussion that is generated by this study will help to reframe conversations at the district-level around the goals of teaching and learning with technology and how technology usage policies can support the achievement of these goals. This dissertation was created to also help inform the current body of literature by identifying technology directors' perspectives related to ethical and legal issues that may arise as a result of these technology usage policies in schools.

As mentioned, this study is focused around technology directors' perceptions of their technology usage policies (AUP, RUP, EUP) within their districts. It is important to note that the scope of this study is limited to examining the technology usage policies of school districts with a current personalized technology initiative in place and was done through the lens of the technology director's perspective on those policies. Although other personalized technology initiatives are popular, this study was focused on examining those usage policies within the context of 1:1 initiatives. In general, students with individual school-issued devices spend more time with their technology and therefore have greater access to the Internet and other resources. As such, I believe that these learning environments provided the greatest insights in informing the current study. While this study is focused on the perspectives of technology directors, it is important to note that the specific role and job responsibilities of each technology director varies greatly based on the values and needs of their unique school community. This is especially true

in rural communities, where technology directors are often responsible for other roles outside the scope of managing a school district's access to technology.

The focus was exclusively on rural, public, K-12 schools within the State of Indiana. It is limited to public, rural schools because of the unique financial, logistical, and legal constraints faced by schools in rural areas (to be discussed in more detail in Chapter 2: Literature Review). Taking this into consideration, I intentionally designed the current study for the purpose of identifying technology policy trends and technology directors' perspectives within the State of Indiana. By narrowing the scope in this way, this study provides relevant, contextual, and timely information for technology leaders across the state. It is especially informative for those districts exploring 1:1 implementation. However, narrowing the scope of this study also created limitations, namely in terms of generalizability (to be addressed in Chapter 3: Methodology).

This study rests on the assumption that technology integration into the learning environment is, and will continue to remain, desirable. While there are some groups within education that would prefer to maintain the status quo sans student devices, it seems likely that the way students participate in the educational process will only continue to change (Project Tomorrow, 2017). With the fast pace of evolving educational technologies, it also seems likely that students in the next generation will learn in ways that we cannot even fathom now. Regardless of whether or not the trend towards 1:1 technology initiatives continue to grow in popularity, it does seem probable that schools will continue to look for innovative policies and ways to organize and manage future initiatives, on which this study can inform.

This dissertation is also personally significant to me because I work in the education field with technology integration on a daily basis due to my current professional role. For the past

three and a half years, I have worked as the Director of Innovative Learning for Five-Star Technology Solutions in Southeastern Indiana. In this role, I regularly consult with school districts to help them create a vision for learning with technology, plan for and implement various technology integration models (most commonly 1:1), set policies/procedures, equip administrators with the skills and strategies necessary to lead change, and provide training/support to teachers who are using technology in their classrooms. Our mission as a company is to "create awesome learning experiences for kids." As an expert in the field, I know firsthand how essential technology usage policies are for schools who are implementing a 1:1 personalized technology initiative in their schools. Furthermore, I decided to examine rural schools in this dissertation because most of the clients that I directly work with are located in rural areas. I often hear from technology directors in these rural areas that they face unique challenges (e.g. less funding, fewer human resources, less access to professional development) than other larger, more urban districts do not share with me. In fact, it is because of my experiences in working with these school districts that I was driven to research this topic in this problem of practice within the context of rural schools.

Chapter Two: Literature Review

As mentioned in Chapter One, this study focused on three main research questions. First, how did technology directors choose their type of technology usage policy and what was their purpose for selecting that type of policy? Second, what are some of the essential conditions to support technology usage policies in schools and what are some of the constraints of these policies? Third, what are the perceptions that technology directors have about the ethical and legal implications of their technology usage policies within the context of implementing a personalized 1:1 technology initiative in their district? Prior to analyzing these questions, it is important

to review the existing research relevant to technology in rural schools and technology usage policies.

Therefore, this chapter provides an overview of the literature relevant to this study. It not only provides a background to the present study, but it also helps to identify gaps in the existing literature that the current study will address. Section 2.1 examines the existing literature related to the unique strengths and challenges of using technology in rural schools. Section 2.2 then analyzes the literature addressing technology usage policies and how AUPs, RUPs, and EUPs are different from each other. Section 2.3 describes the four key essential conditions that should be met in schools in order for technology usage policies to be most effective. Section 2.4 identifies the most common purposes of technology usage policies and outlines the constraints of these technology usage policies. Section 2.5 identifies potential ethical, moral, and legal concerns with implementing technology usage policies in schools. Finally, Section 2.6 wraps up with an analysis of the existing body of literature to identify current gaps in research on this topic.

2.1: Technology in Rural Schools

In this section, I will review the literature related to technology in rural schools. As mentioned in Chapter 1, I chose to study rural schools specifically because they have many unique strengths and challenges due to their location and definition. When reading through the body of literature, four studies discussed these unique strengths and challenges, which are relevant to the current study. All four of these studies were empirical in design; in other words, they were based on actual, replicable research studies instead of just on scholars' ideas, theories, or beliefs. These studies are reviewed in more detail in this section.

Definition. Mathis (2003) defines a rural school as "a school in a community whose population is less than 25,000 people" (as cited in Cullen, et. al, 2006, p. 10). According to the U.S. Department of Education (2002), rural schools account for almost 42 percent of all schools in the United States (Cullen et. al, 2006). It is important to note that a school's remote location does not necessarily correlate with a lower socioeconomic status (Howley, Wood, & Hough, 2011). Rather, socioeconomic status is more closely related to poverty statistics of a school, largely determined by the number of students at a school who receive free and reduced lunch (Bouck, 2004).

Strengths. By their nature, rural schools have several unique strengths that urban and suburban schools do not enjoy with regards to technology. One such strength pertains to teacher attitudes and beliefs about using technology in the classroom. In general, Howley, Wood, and Hough (2011) found that teachers from rural schools had more positive attitudes toward technology integration than teachers from urban or suburban schools. Additionally, these rural teachers were generally well-prepared for using technology in their classrooms because these schools recognized the value of it for their students (Howley, Wood, & Hough, 2011). Some of the most valued uses for integrating technology in rural schools are to: (1) meet the needs of non-traditional students (Barter, 2013), (2) develop independent learners (Barter, 2013), (3) expand students' awareness of their world (Howley, Wood, & Hough, 2011), (4) personalize and enhance learning (Barter, 2013), (5) increase courses available to students through distance education (Howley, Wood, & Hough, 2011), and (6) improve "educational equity for impoverished rural families" (Howley, Wood, & Hough, 2011, p. 3).

Challenges. Just as rural schools have unique strengths tied to their identity as remote, small schools, they are also faced with several unique challenges when integrating technology

into their classrooms. While "there is a growing expectation that the educational system should be equipping students for life in what has been termed the knowledge society", rural schools have limited resources in order to fulfill these expectations for all students (Barter, 2013, p. 42). While not specifically about rural schools, Blackboard's 2018 Project Tomorrow Speak Up Survey found that "larger school districts often have a greater human capacity than smaller districts for providing hands-on support within schools as they implement digital initiatives, including new learning models" (Blackboard, 2018, p.14). In general, Bouck (2004) points out that rural schools often offer fewer curriculum options and are influenced by communities who have lower expectations for students, especially related to using technology. For many rural schools, finding funding is the most difficult challenge when trying to purchase and maintain technology for instruction (Cullen et. al, 2006). This is largely because state funding formulas are usually distributed on a per-pupil basis - thereby placing rural schools at a disadvantage (Cullen et. al, 2006). Because technology is constantly changing and funding is hard to obtain, schools struggle to update their systems as frequently as change occurs (Barter, 2013). Also, in some rural school districts, a lack of funding creates environments in which teachers are not well supported through maintenance and professional development related to using technology for instruction (Howley, Wood, & Hough, 2011). In addition to struggling to provide technology-rich learning experiences within their buildings, rural schools are also faced with a student population that may not have regular access to technology and information at home, thereby reducing the potential impact of using technology for learning outside of the school day (e.g. homework) (Bouck, 2004). It is precisely because of challenges like these that the National Education Policy Center has advised states to create legislation that ensures that "a student's access to educational access should

not be limited by where the student lives or by the socioeconomic resources available to the student" (Bathon, 2011, p. 3).

2.2: Overview of Technology Usage Policies

Now that the unique challenges and strengths of rural schools with regards to technology access and integration have been discussed, a review of the literature about technology usage policies is examined. In analyzing the current body of literature, thirteen studies were determined to be relevant to the current study because they discussed one of the three main types of technology usage policies: Acceptable Use Policies (AUPs), Responsible Use Policies (RUPs), or Empowered Use Policies (EUPs) and their relationship to personalized, 1:1 technology initiatives in K-12 schools. Of these thirteen studies that discussed technology usage policies in general, seven of them specifically mentioned AUPs by name, zero specifically mentioned RUPs, and four specifically mentioned EUPs. An introduction to the emergence of technology usage policies is included below, followed by a more detailed analysis of the literature related to each of these technology usage policies in the subsequent subsections.

Overview of technology usage policies. In recent years, students have been introduced to an overwhelming amount of new technologies in their personal lives and the "unprecedented ability to send text messages and instant messages, create websites, post blogs, construct Internet profiles, and post messages on burgeoning social Networking sites, most notably Facebook" (Osborne & Russo, 2012, p.1). As a direct result of these advances in technology, many educational professionals have recognized the need to integrate technology into their classrooms to both engage and equip all students with the skills necessary for personal communication, work, and edu-

cation (Chapman, Loveless, & Roberts, 2000). Simply put, there is a shift that is actively occurring in the discussion around where learning is "housed", with a dramatic shift in support toward 1:1 technology initiatives and online and blended learning opportunities for students (Salsberry, 2010, p.14). In fact, in 2017, Project Tomorrow's Speak Up Survey found that 68% of teachers report that they are now able to use technology and blended learning methods to differentiate and better meet the needs of their students as a result of this pedagogical shift (Project Tomorrow, 2017). Looking ahead, this shift in mindset is predicted to continue, and schools should prepare to offer a more individualized, collaborative, online learning experience for students (Kong, et. al, 2014).

In addition to 1:1 personalized technology initiatives, in which the school provides every student with a device for learning, many schools have started to offer online learning opportunities in which students receive some or all of their instruction over the Internet (Burdette, Greer, & Woods, 2013). In their study, Burdette, Greer, and Woods (2013) found that online learning is offered as an alternative to traditional education in every U.S. state, with a dramatic increase in full-time enrollments (four times more than they were a decade ago). Despite this increase in popularity, online learning is not likely to be a replacement for traditional schools; however, it does pressure traditional schools to meet these demands for online learning opportunities through personalized learning initiatives such as 1:1 programs (Burdette, Greer, & Woods, 2013; Paska, 2012).

When schools choose to provide learners with personal computing devices and access to digital learning platforms and Internet-based resources, it is imperative that they also consider how they are going to set expectations for responsible use, while also teaching 21st Century

Skills (Kong, et. al, 2014). One such way that schools can accomplish this is through clear technology usage policies and digital citizenship education (Burdette, Greer, & Woods, 2013). In the following section, a review of the literature related to the specific types of technology usage policies will be discussed in detail.

Acceptable Use Policies (AUP). Simply put, an acceptable use policy can be defined as a legally binding document that describes what users are permitted to do and forbidden from doing (ex. using chat rooms) while using the Internet or school-issued devices (Crane, 2004). These policies can cover Internet usage at the district, school, or even classroom level (Crane, 2004). Rafael (2014) asserts that the overall purpose of these types of policies is "to provide safe parameters for exploring digital resources and using school-issued devices properly" while also making sure "that schools do their very best to block out the darkest corners of the web" (p. 2). In most schools, district officials require a signature by students and parents, acknowledging the terms of the written agreement and the "conditions of Internet use and rules of online behavior and access privileges" (Crane, 2004, p. 13). By signing these acceptable use policies, students are saying that they understand what is expected of them and they are agreeing to abide by the terms of the AUP in order to access the Internet (Crane, 2004). Similarly, parent signatures indicate that the parent/guardian has read, understood, and accepted responsibility for their child's internet use outside of school (Crane, 2004). Some school districts even require teachers (and other staff members) to sign these acceptable use policies, stating that they will guide, supervise, and instruct students in how to use the internet properly (Crane, 2004).

A significant amount of the existing body of literature regarding acceptable use policies seeks to justify the need for such a technology usage policy in schools. One rationale for an ac-

ceptable use policy is that they help schools address the practical and logistical challenges of introducing technology by holding students, parents, and teachers accountable for proper usage (Gable, 1998). Furthermore, Futoran, Schofield, and Eurich-Fulcer (1995) advocate for AUPs because they allow schools to increase clear communication with parents about this accountability by outlining acceptable behaviors, possible dangers of accessing the Internet, and consequences for infractions. Overwhelmingly, the most common justification cited by researchers is the pedagogical idea that "there is a compelling need for schools to adequately respond to changes in society so that students will be prepared to be successful in today's and tomorrow's world" (Flowers & Rakes, 200, p. 352). In other words, the literature indicates that schools recognize the need to teach students about acceptable behavior when using technology, while also equipping them with the skills that they will need after graduation (Futoran, Schofield, & Eurich-Fulcer, 1995). In addition to the practical and pedagogical reasons cited above, Crane (2004) points out that many schools are required to have acceptable use policies through state legislation or in order to be eligible to receive federal funding such as e-rate.

Another common theme in the current body of literature is focused on identifying the key components of a typical acceptable use policy. Crane (2004) suggested that all AUPs contain at least the following four parts: (1) introduction, (2) purpose and educational goals, (3) conditions of internet use/list of inappropriate behaviors (e.g. violation of copyright laws, transmission of inappropriate content), and (4) agreements or contracts signature page. In addition to the sections, Flowers and Rake (2000) identified six additional components: (1) disclaimer statements (e.g. district reserves the right to monitor user activities); (2) netiquette (e.g. generally accepted rules for polite behavior on the Internet); (3) consequences for inappropriate behavior statements (e.g. loss of Internet access); (4) liability concerns (e.g. damages and costs incurred by users,

content quality and accuracy, and services liability); (5) network security statements (e.g. viruses, vandalism, storage limitations, damaging the network); and (6) orientation requirement statements. In addition to all of the components listed in this section, Riker Danzig (2000) urges school districts to include a statement that makes "a violation of the AUP a violation of the code of conduct" of the school district (p. 2).

Furthermore, the existing body of literature indicated that many AUPs "might include statements reminding users that Internet access and the use of computer networks is a privilege" (Crane, 2004, p.15). It is this last component that influenced the direction of the current study toward legal, moral, and ethical implications of treating Internet access as a privilege (as opposed to a right). Futoran, Schofield, and Eurich-Fulcer (1995) acknowledged this in their findings: "although most AUPs state that students access privileges will be lost with infractions, in reality, educators must grapple with the consequences of implementing such policies" (p. 234). These "consequences" will be discussed further in Section 2.5 of this literature review, focused on ethical, moral, and legal concerns of implementing technology usage policies.

Although small, there is a portion of the existing body of literature that is focused on a comprehensive, overall study of AUPs. Flowers and Rakes (2000) suggest that this is because AUPs have not been implemented for a long enough period of time for the literature to be truly research-based (as opposed to prescriptive or experience based). Despite only being researched by a handful of scholars, there are several key findings from the existing body of literature that can be used to inform the current study. One such finding was that most AUPs "specify the consequences of inappropriate on-line behaviors (inflammatory e-mail, bad language, downloading obscene images, etc.), but most avoid going into great detail and instead point to existing student conduct policies" (Futoran, Schofield, & Eurich-Fulcer, 1995, p. 234). In their study of AUPs,

Flowers and Rakes (2000) identified six other key findings: (1) few AUPs have been challenged, (2) most AUP administrators are school-level personnel, (3) supervision of students while they accessed the Internet was largely the responsibility of the classroom teachers, (4) e-mail was the application students used most, (5) loss of Internet access was the usual consequence for inappropriate behavior, and (6) orientation about Internet access and use was required for both students and teachers in more than half of the schools surveyed (p. 362).

A review of the existing body of literature about AUPs pinpointed several positive and negative aspects of using these technology usage policies in schools. First, AUPs have the potential to be utilized by schools as instructional tools to teach students how to use the Internet in positive ways, while also educating them about the potential dangers and hazards of inappropriate online behavior (e.g. giving out personally identifiable information to strangers) (Osborne & Russo, 2012). This focus on the opportunity to use AUPs as opportunities to teach users how to use technology responsibly is also extremely positive for school leaders because it helps to balance competing values such as safety concerns and First Amendment rights (e.g. freedom of speech, press, and religion) (Crane, 2004). Despite the potential for positive impact of using AUPs to teach students about responsible behavior online, Gable (1998) found that (a) most schools used the AUPs as "disclaimers of liability" instead of teaching tools and (b) when schools did use the AUPs to instruct students, it had "little effect in stopping children from exploring Internet sites from which they should stay away" (p. 4). In other words, although schools are well-intentioned in implementing AUPs, the training that many provide is ineffective at changing student behavior (Gable, 1998).

Another significant finding from the body of literature about AUPs focused on the tone and wording of these policies. McLeod (2014) contends that many AUPs were worded negatively as a list of prohibited behaviors rather than a guide for appropriate use. Furthermore, many scholars found that the language contained in most AUPs was too legalistic or complicated for students and parents to completely read and understand (Futoran, Schofield, & Eurich-Fulcer, 1995). Similarly, Rafael (2014) asserted that AUPs are written more as legal documents to protect schools rather than educational documents that students can understand and abide by. While there seems to be consensus that AUPs are legal documents, some innovative researchers suggest that school leaders should take students' age and maturity into consideration when writing these policies and look into creating differentiated policies for each level (Osborne & Russo, 2012). Below are examples of common phrases from AUPs (McLeod, 2014):

1. "Students shall not use technology unless authorized by appropriate school personnel."
2. "The use of the Internet is a privilege, not a right, and inappropriate use will result in cancellation of those privileges."
3. "Users have no right to privacy while using the district's Internet systems. The district monitors users' online activities and reserves the right to access, review, copy, store, or delete any electronic communications or files. This includes any items stored on district-provided devices, such as files, e-mails, cookies, and Internet history."
4. "Students will not access or modify other accounts, data, files, and/or passwords without authorization."
5. "You will be held responsible at all times for the proper use of district technology resources, and the district may suspend or revoke your access if you violate the rules."

Responsible Use Policies (RUP). A school district's Responsible Use Policy (RUP) is similar in purpose to an AUP in that it attempts to establish guidelines for users' technology usage. In contrast to an AUP, a RUP sets a more positive tone for technology usage within a school district by focusing on learning activities with technology, and teaching students how to be good digital citizens (Murphy, 2012). Also distinct from AUPs, RUPs focus more on teaching meaningful, responsible, and safe usage of technology by all members of the school community (Murphy, 2012). It is also important to note that most RUPs are developed out of an already existing AUP.

Interestingly, in my review of the literature, I was unable to locate any articles that specifically used the term "responsible use policy." Rather, some researchers chose to use the more generic term of "acceptable use policy" to be more inclusive of policies that took a specific focus on teaching responsible use. Despite the apparent lack of literature about this type of technology usage policy, almost every article that I perused noted the critical importance of teaching students what responsible behavior online looks like.

Empowered Use Policies (EUP). While some scholars have stressed the need for empowered use policies, few schools have actually implemented such policies in their districts. As a result, there were zero studies in the current body of literature that focused on empowered use policies. As a result of the infrequent implementation of these policies, the majority of the literature about EUPs is not specific to the policies themselves, but rather describes the need for elements of empowered use policies, as defined by McLeod (2014).

In today's global society, our students are expected to leave our K-12 educational institutions, equipped with many essential skills, including inquiry, critical thinking, evaluating information, communication, and collaboration (Kong et. al, 2014). Throughout the literature, it is

clear that schools can no longer define literacy as being able to read and write - they must also teach their students to be technologically literate as well (Baum, 2005). Cordes (2004) describes it this way:

> The goal of technology literacy is to enable young people to develop their own creative and critical capacities in relating to technology, not to train them to be machine operators. Then they will clearly see that their own choices are not limited to adjusting themselves to a 21st Century determined by technology. Instead, this new generation will have the awareness, the moral and ethical sensibilities, and the will to adjust technology to fit their 21st Century. (as qtd. in Baum, 2005, p. 55)

In other words, many researchers like Cordes recognize that our students are often limited by what they do with their technology for learning because we place so many restrictions on them via technology usage policies like AUPs. Recognizing the disconnect between the "lofty and legalistic" verbiage in Acceptable Use Policies (described in the sections above) and the urgent need for student empowerment and voice/choice, some schools have started to adopt Empowered Use Policies instead (Rafael, 2014).

EUPs most significantly differ from RUPs in terms of defining how users should interact with technology. While RUPs are focusing on educating users about how to use technology responsibly, EUPs offer more freedom to the user, suggesting that the user should be empowered to use technology creatively to engage in the learning process (McLeod, 2014). With RUPs, there is still some element of trying to define how users should interact educationally with technology. EUPs abandon that concept altogether, acknowledging that the user should be equipped

with the skills necessary to feel empowered to use the technology as they deem necessary for educational purposes (McLeod, 2014). Like RUPs, EUPs also provide for teaching responsible and safe behavior while online.

Below are two common examples of such Empowered Use Policies.

Example 1.1: Empowered Use Policy (McLeod, 2014)

When it comes to digital technologies in our [school/district], please…

1. Be Empowered. Do awesome things. Share with us your ideas and what you can do. Amaze us.
2. Be Nice. Help foster a school community that is respectful and kind.
3. Be Smart and Be Safe. If you are uncertain, talk with us.
4. Be Careful and Gentle. Our resources are limited. Help us take care of our devices and networks.

Example 1.2: Empowered Use Policy (CIPA and COPPA compliant) (Rafael, 2014)

I understand that using digital devices (whether personal or school owned) and the GDRSD network is a privilege, and when I use them according to the responsible use guidelines I will keep that privilege. I will:

- Use digital devices, networks, and software in school for educational purposes and activities.
- Keep my personal information (including home/mobile phone number, mailing address, and username/password) and that of others private.
- Show respect for myself and others when using technology, including social media.

- Give acknowledgement to others for their ideas and work.
- Report inappropriate use of technology immediately.

2.3: Essential Conditions to Support Policies

In studying personalized technology initiatives across the United States, researchers have repeatedly concluded that merely providing access to technology is not sufficient to ensure that it is being used to positively impact teaching and learning (Hudson, 2004). Although scholars have different opinions about exactly how to achieve the best results, most agree that school districts should have a technology plan in place to guide the implementation of their personalized 1:1 technology initiatives (Hudson, 2004). By reviewing the current body of literature, the following four ideas were identified as essential conditions to supporting a school district's technology plan and implementing a successful 1:1 technology initiative in one or more of the thirteen studies reviewed for this section: (1) alignment of technology vision to the overall district vision (noted in seven studies), (2) development of a positive school culture (noted in two studies), (3) availability of teacher training for teachers (noted in six studies), and (4) integration of digital citizenship and leadership into the curriculum for all students (noted in four studies). Each of these will be discussed in more detail in the subsections to follow.

Essential condition #1: alignment of vision. The most commonly cited essential condition for supporting a school district's technology plan and implementing a successful 1:1 technology initiative was that of an alignment of the district's vision for teaching and learning with technology and the overall vision of the school district (Paska, 2012). Several accreditation and school improvement research models such as AdvancED have long since identified that having a vision and purpose in general as one of the seven standards that have been linked to research-

based strategies for improving student achievement in schools is necessary (Salsberry, 2010). Building on these models, the body of research identifies several reasons why it is essential for school districts that are implementing a personalized, 1:1 technology learning initiative to also develop a specific, targeted vision for what teaching and learning looks like with technology. Citing the International Society for Technology in Education (ISTE) Standards, the New York's State Board of Regents for Education has identified a specific need for an instructional and curricular focus across the state and a specific action plan for how technology (specifically issues related to Internet use and safety) can be integrated across "all courses and subjects" (Paska, 2012, pp. 6-7). For schools in New York, this focus is provided through a statewide technology plan, centered around a common vision for teaching and learning with technology (Paska, 2012).

In addition to helping provide a focus, a vision for teaching and learning with technology plays a critical role in helping school leaders identify, set, and achieve their goals as a school district and is essential for creating and sustaining a culture of personalized learning within their schools (Blackboard, 2018). Kong et al. (2014) describe why a focused, aligned vision for teaching and learning with technology is necessary for all stakeholders to set and achieve goals together by asserting that:

> School leaders need to steer goals and directions of e-learning programs; teachers need to develop and implement sound e-learning pedagogical practice; parents need to acquire digital services and e-learning resources for learners' seamless learning after class; learners need to learn with diverse subject-related digital resources that encourage active engagement in constructive learning and peer interaction for developing domain knowledge and 21st Century Skills. (p. 76)

The 2010 U.S. Federal Technology Plan's vision identifies several broad areas of focus for setting and achieving goals in a technology-rich learning environment such as: learning, assessment, teaching, infrastructure, and productivity (Paska, 2012).

Most relevant to the current study is the potential for an aligned vision to help school leaders develop, implement, and enforce policies for technology usage. Osborne and Russo (2012) describe the many challenges that school leaders and school boards encounter when asked to "face the new challenges posed by evolving technology" and explain how technology usage policies can help (pp. 11-12). The biggest challenge cited was that of "maintaining a safe, orderly, and well-disciplined environment for learning" (Osborne & Russo, 2012, pp. 11-12). Likewise, Futoran, Schofield, and Eurich-Fulcer (1995) urged school district leaders to use such policies to develop structures to proactively address issues that accompany changes in technology in order to try to think through potential problems before they occur. Osborne and Russo (2012) take this a step further by identifying the need for these policies to address both proper technology and Internet usage and corresponding disciplinary sanctions for inappropriate actions that can easily be communicated to parents and students before an issue arises. Donlevy (2007) adds that these technology usage policies are pivotal in helping school leaders actively model their vision for teaching and learning with technology, as well as expected behaviors.

A significant section of the body of research on this topic is devoted to describing what such a vision for teaching and learning with technology should look like. First and foremost, a school district's vision for teaching and learning with technology must align with and support the school's mission; in other words, the purpose of integrating technology (and the importance of doing so) must be clearly tied to the things a school district is already trying to achieve (Farmer, 2002). Second, a vision should be inspiring - it should be "enough to make even the most jaded

educator draw in a breath in wonder" (Futoran, Schofield, & Eurich-Fulcer, 1995, p. 229). If the vision is truly inspiring, it should serve as a vehicle for gaining buy-in from key stakeholders by uniting and engaging the larger community (Paska, 2012). Third, a strong vision for teaching and learning with technology will be innovative and focused on the future as well as the present (Donlevy, 2007). Fourth, a strong vision for teaching and learning with technology must be focused on the skills and activities that students need to be successful in today's world (ex. 21st Century Skills) (Kong et al, 2014). Finally, a strong vision for teaching and learning with technology must be shared by school leaders with the entire school community, especially involving parents (Blackboard, 2018).

Essential condition #2: positive school culture. A second essential condition for supporting a school district's technology plan and implementing a successful 1:1 technology initiative is that of developing a positive school culture that is conducive to teaching and learning with technology. Creating technology usage policies that will stand the test of time, through constantly evolving changes in technology can be extremely challenging; therefore, establishing a school culture and climate that encourages technology usage, provides support and resources, and focuses on the effectiveness of teaching with technology is essential for any school district with a 1:1 technology initiative (Paska, 2012). Paska (2012) concluded that "a building that is focused on frequent use of technology for teaching and learning - with clear guidelines for all who use technology in the school district - will promote a healthy climate in which expectations for active participation in the digital world are understood and properly managed by all" (p. 2). In order to adequately support teaching and learning with technology, school leaders need to focus on removing barriers to using technology in their buildings while simultaneously focusing on meeting the needs of their students and teachers (Rice, 2009). Furthermore, a positive school

culture of respect and trust is needed in order to respond proactively to inappropriate online behaviors that might otherwise impact students' academic and emotional well-being, most notably cyberbullying. In fact, Paska (2012) asserted that "a school's culture may be the single most important factor in preventing, limiting, and/or dealing with bullying and cyberbullying incidents" (p. 7). The task of creating and maintaining a positive school culture has been made more complex with the introduction of technology; as such, Paska (2012) offered that educational leaders employ these five strategies: (1) continual outreach to and inclusion of families and the surrounding community, (2) attention to school climate and relationships between adults and students, (3) age-appropriate skills acquisition through character education, social-emotional learning, and standards based instruction, (4) after school, out-of-school, extracurricular, service learning programs and mentoring, and (5) alignment of district and school support personnel, policies, and practices (p. 8).

Essential condition #3: availability of teacher training. A third essential condition for supporting a school district's technology plan and implementing a successful 1:1 technology initiative is that of ensuring that all teachers have access to adequate training and professional development. In 2017, 67% of technology leaders. Identified "motivating teachers to change their traditional instructional practices to use technology more meaningfully with students" as their biggest challenge (Project Tomorrow, 2017, p. 1). The need for this essential condition is identified in President Clinton's Educational Technology Initiative, which suggests that "all teachers in the nation will have the training and support they need to help students learn using computers and the information superhighway" (Chapman, Loveless, & Roberts, 2000, p. 319). In fact, Chapman, Loveless, and Roberts (2000) assert that lack of adequate teacher training is the "big-

gest deficit" currently in schools who are integrating technology due to a sheer lack of experience with using technology for teaching and learning (p. 314). In his research, Prensky (2001) supports this claim by finding that most teachers are digital immigrants, meaning that they have had to learn how to adapt to teaching with technology because they did not grow up using technology for learning; in contrast today's students are digital natives, meaning that they have grown up in learning environments that are immersed in technology (as cited in Howard, 2013). Interestingly, 43% of high school students in 2018 reported that their "primary obstacle to using technology at school is that their teacher limits that usage in the classroom" (Blackboard, 2018, p. 11). Along the same lines, research seems to indicate that many educators find themselves "relegated to bystanders as their students acquire online habits and practices that might not be in their best interests" largely because these educators were "introduced to technology in a different fashion than the current generation of students" (Howard, 2013, p. 41).

Throughout the existing body of literature, researchers have made it clear the acquisition of technology devices or provision of access to the Internet is not enough to ensure a successful technology initiative in schools (Hudson, 2004). Rather, "the ability to use digital resources to provide every child with a highly personalized learning experience is greatly diminished if the usage is not effective or if it is only sporadic" (Blackboard, 2018, p. 11). Hudson (2004) suggests that school leaders can better ensure that the technology that they choose to integrate will be used effectively for teaching and learning by training teachers, developing content for various subject areas and grade levels, and testing teacher competency at using these tools. Others, like Paska (2012), argue that school leaders must look beyond selecting devices as resources and start seriously considering how these technology tools will "meaningfully impact teaching and learning" (p. 4).

Overall, the existing body of literature identified four key areas of focus for teacher training. First, teachers must be taught to embrace a growth mindset and a willingness to take risks (Howard, 2013). For instance, Ottenbreit-Leftwich (2007) found that teachers who are expert technology users "represented themselves as being open, flexible, and willing to change" and were able to "constantly seek new ways to change, challenge, their pedagogical approaches, take pedagogical risks, and learn from successes and failures" (pp. 112-113). Second, in order to establish buy-in, teachers must be exposed to training that allow them to see the true value and potential of integrating technology into their classrooms (Ribble, as cited in Howard, 2013). In other words, teachers must be provided with experiences that show them the "value of meaningful technology integration that focuses on using technology for a specific instructional purpose" (Ottenbreit-Leftwich, 2007, pp. 171-172). One such example of relevant professional development that teachers are asking for is related to how to "differentiate and personalize learning" in their classroom with technology (Blackboard, 2018, p. 12). Third, teachers must realize the vision for integrating technology into their classroom and be equipped with the skills and lesson design strategies that will help them in "facilitating active, constructive, and interactive learning processes among learners" while also helping teachers feel comfortable finding and using digital resources into their curriculum (Kong et al., 2014, pp. 72-73). For example, expert technology-using teachers can use the positive external reinforcement that they receive from students, other teachers, and administrators when they are integrating technology into the classroom in meaningful ways to further motivate them to try new things and achieve this shared vision for teaching and learning in their classrooms (Ottenbreit-Leftwich, 2007). Finally, if digital citizenship is important for students to learn, then teachers need training to know how to teach these skills and

model school-wide expectations for students as well (Paska, 2012). By actively involving teachers in such leadership activities and school-wide initiatives (like digital citizenship), these teachers can become even more proficient at using technology effectively in their own classrooms (Ottenbreit-Leftwich, 2007).

Essential condition #4: digital citizenship and leadership training for students. The fourth essential condition for supporting a school district's technology plan and implementing a successful 1:1 technology initiative is the need for training for all students that is focused on digital citizenship and leadership skills. First and foremost, school districts are responsible for keeping their students safe by implementing appropriate policies and procedures and a significant part of this process is to teach students how to use technology effectively, efficiently, and safely (Paska, 2012). Gable (1998) and many others note the limitations of technology usage policies and strongly urge educators to be a part of a meaningful solution to keeping kids safe online by actively teaching them these skills. Howard (2013) goes a step further in his research, suggesting that educators have the potential to not only help keep safe while using technology, but also to prepare students for their futures by equipping them with the communication and professional learning skills necessary for success in "the technological workplace" (p. 42). Furthermore, teaching students how to be good digital citizens and how to use the Internet safely and responsibly actively contributes to the creating of a positive school culture, as discussed in Essential Condition #2 (Paska, 2012).

Specifically, the body of literature has identified several key digital citizenship and leadership skills that students need. For example, the National Education Technology Plan "urges a school's instructional program to focus on Internet safety, cyberbullying, and related negative

online practices" (Paska, 2012, p. 4). Futoran, Schofield, and Eurich-Fulcer (1995) add a suggested focus on evaluating online resources, critical thinking, and desirable behaviors in contributing to an online community. Finally, Paska (2012) argues that students must be taught responsibility in the following areas: (1) acceptable use and effective use, (2) netiquette, (3) cyberethics, and (4) protecting personal information. A more detailed discussion of the need for digital citizenship training will be discussed in Section 2.4: Purpose of Technology Usage Policies and the Constraints of Such Policies.

2.4: Purpose of Technology Usage Policies and the Constraints of Such Policies

As mentioned in Section 2.3: Essential Conditions, technology usage policies can be limited if they lack a clear purpose of if they are not properly implemented and supported. As such, I reviewed the existing body of literature to learn about what other schools had experienced. In doing so, I found four relevant studies about the purpose of technology usage policies, and five relevant studies about some of the inherent constraints of implementing these policies. These studies are reviewed in the subsections below.

Purpose. School leaders are often faced with the difficult task of limiting access of students and teachers to technology and the Internet in a way that keeps them safe during (and even outside of) the school day. However, in limiting access, schools often inadvertently "weaken the Internet as a resource for students" (Futoran, Schofield, & Eurich-Fulcer, 1995, p. 231). Futoran, Schofield, and Eurich-Fulcer (1995) suggest that schools have choices beyond blocking/limiting access altogether. Examples of such choices are (1) limiting student access to the Internet by time limits; (2) limiting student access to the Internet to times when they are supervised by a

teacher; (3) using a content filter to block access to harmful sites; (4) opening access to the Internet while also teaching students about appropriate behaviors online; and (5) implementing an AUP that parents and students sign to help reduce inappropriate behavior with technology, regardless of access (Futoran, Schofield, & Eurich-Fulcer, 1995, pp. 230-232).

Of the options presented to schools for limiting access, most scholars advocate for an attitude of teaching acceptable online practices as opposed to seeking to eliminate all potentially questionable content from students (Futoran, Schofield, & Eurich-Fulcer, 1995). Paska (2012) suggests that schools can do this by having students "adhere to the standards within the AUP and code of conduct" while also having teachers who are "modeling safe, efficient, effective, interconnected technology use" (pp. 5 & 10). Scholars warn that content filters are not perfect; in other words, it is impossible to eliminate all potentially questionable or objectionable content without unnecessarily blocking sites with legitimate academic value (ex. Blogs, wikis, and social networks) (Paska, 2012). Furthermore, Futoran, Schofield, and Eurich-Fulcer (1995) suggest that if students really want to access inappropriate content that is blocked by content filters, they can easily do so by using a proxy to get around the limitations established by schools. The strongest argument against outright blocking or limiting Internet access comes in the form of a question: "If a student is denied access for inappropriate on-line behaviors, what is an acceptable educational substitute for Internet access that has been fully integrated into the curriculum?" (Futoran, Schofield, & Eurich-Fulcer, 1995, p. 230). Instead of blocking altogether, many experts suggest taking a case-by-case approach to limiting access and only resorting to drastic blocking measures after repeated attempts to work with and educate students about responsible and acceptable technology usage (Futoran, Schofield, & Eurich-Fulcer, 1995). Furthermore, it is widely accepted that students need a variety of technology-related skills for success in today's

world. Many argue that schools should be providing opportunities for students to gain skills such as evaluating the quality of content, identifying reliable information, protecting themselves (and their information) online, academic integrity, and a variety of issues (legal, social, ethical, and human) that accompany technology use (Paska, 2012).

Another reason for limiting students' access to the Internet and technology is the concern that students are too distracted by the technology to use it effectively. Garcia (2012) writes about the shift of power in the classroom that occurs when technology is introduced. Specifically, Garcia (2012) argues that the "always on" nature of our society has led to more mobile devices in students' hands and with this shift, it has become more challenging for teachers to manage the use of these devices in their classrooms (pp. 430-431). Becker (2011) also identifies this dilemma that school leaders face between providing opportunities for students and teachers to be creative without also causing distractions for students. Interestingly, the body of literature suggested that the reason for this shift in power, tension, and conflict around mobile technology devices is a result of two groups who view technology in "diametrically opposing ways" (Garcia, 2012, p. 432). While teachers often see the distractions that technology can cause in their classrooms, students see social time and learning activities as interconnected and "occurring concurrently" (Garcia, 2012, p. 432). Furthermore, students also shared that they do not intentionally want to waste class time on their devices, but rather, they turn to the devices when they are not being appropriately or sufficiently engaged in the learning in the classroom. One student said it this way: "it's just that when we're in class, we've got nothing else to do" (Garcia, 2012, p. 431).

While some educational leaders feel strongly that students' personal mobile devices do not belong in the educational environment at all, others are making an effort to learn about how students use these technologies for learning (Becker, 2011). One thing that educational leaders

have learned is that drastic double-standards for students and teachers creates a feeling of a lack of trust, understanding, and respect. Garcia (2012) posits that students are not generally allowed to use their personal devices during class time, while teachers are indeed using their personal devices during the same time (or during times when they are supposed to focused on another learning task, e.g. staff meetings). Educational leaders also know, however, that "if students do not feel that their teachers trust them, as reflected in classroom structure and pedagogy, mobile use will often be in opposition to teacher goals" (Garcia, 2012, p. 432).

Constraints of policies. Technology usage policies are useful to school districts by allowing them to act proactively in establishing expectations before behavior issues arise when technology is integrated into the classroom (Newman, 2012). Furthermore, when designed correctly, these policies can provide numerous benefits for the larger community as well by collecting evidence of improvement, building awareness of initiatives, balancing collaborative and individual learning opportunities, and bridging the gap between school curriculum and societal expectations (Kong, et. al, 2014). While acknowledging the potential benefits of technology usage policies, a significant portion of the existing body of literature acknowledges the constraints and limitations of such policies (Baum, 2005).

One such constraint comes from the fact that most technology usage policies are developed by a committee of representatives from the school district (Crane, 2004). While it is positive that committee members have an opportunity to have input into developing a policy that will meet the unique needs of their school community, many of these policies are not based on research and best practices. Kong et. al (2014) argue that all policies should be tied to research-based findings in order to truly allow the policies to help schools achieve their goals and allow students to reap the benefits of valuable learning environments. Furthermore, the policies that

the committee develops often lack legal authority when schools fail to have their attorney review the policy for potential legal issues before presenting it to the school board or implementing it in their buildings (Crane, 2004). On the other hand, if schools opt not to adopt a technology usage policy because they are concerned with the legal authority of the policy (ex. asking parents to sign to give them permission to use technology or access the Internet in a learning environment that is dependent on such access), they run the risk of creating a learning environment that lacks standards, expectations, and best practices in place (Flowers & Rakes, 2000). Potential legal concerns of implementing such technology usage policies will be discussed in more detail in Section 2.5: Ethical, Moral, and Legal Concerns.

Another major constraint of technology usage policies has to do with the ever-changing nature of technology itself (Burdette, Greer, & Woods, 2013). Chapman, Loveless, and Roberts (2000) point out that "keeping up with the technology is (also) a formidable challenge, given the pace of change in the industry and other demands on teachers' time" (p. 314). Many other researchers echo this sentiment by describing educators who are overwhelmed by feeling as though a new technology emerges just as they have really gotten a handle on the last 'new' technology (Rafael, 2014). Futuran, Schofield, and Eurich-Fulcer (1995) explain the challenge that school leaders face in implementing technology usage policies by recognizing that constantly changing technology makes it impossible "to know in advance all the ways that students might get into trouble on the Internet or be harmed by others" (p. 235). As a result, many technology usage policies are limited because they are not updated as often as the technology evolves (Howard, 2013). Despite this constraint, Howard (2013) and Newman (2012) suggest that school leaders can counteract this constraint by seeking to craft a technology usage policy that is flexible and that acts as a helpful set of guidelines and rules, rather than an absolute document that must be

followed to the letter. Of course, school leaders can always update their technology usage policies as necessary (Crane, 2004).

Yet another constraint of technology usage policies is that a policy alone is not enough to change behavior. For example, without proper enforcement, a technology usage policy is not effective (Deseret News, 2009). Ford (2009) writes that technology usage policies "only work if schools decide to employ them" (p. 4). Also, a document that outlines behaviors is not sufficient to teach proper behavior; good, positive choices in the digital world must be explicitly taught to students and teachers (Rafael, 2014). School districts must go beyond implementing a dialogue box or simple piece of paper for students to sign if they really want these policies to be effective (Becker, 2011). Teaching good judgement is more involved than just a one or two-day lesson; rather, it must be a "theme we address throughout the course" (Baum, 2005, p. 55). Furthermore, without a transparent, positive school culture with trust (discussed more in Section 2.3: Essential Conditions to Support Policies), such technology usage policies come up short of their intended goals (Rafael, 2014).

In most technology usage policies, the focus is on blocking content or prohibiting inappropriate behavior; however, doing so limits their effectiveness. In general, scholars agree that schools should seek to shift the focus to a positive connotation around technology use (Rafael, 2014). Paska (2012) argues that merely blocking inappropriate content is not the solution; instead, students should be presented with an opportunity to actively use the technology and simultaneously understand "the privileges and responsibilities of using technology for learning" (p. 2). Because inappropriate material is easy to access, even with filters in place, it is critical that we teach our children what to do when faced with objectionable material (Gable, 1998). Instead of

just restricting what our students are doing, clearly-written technology usage policies, give educators an opportunity to empower students to use technology properly (Rafael, 2014). Likewise, when schools resort to blocking without teaching proper behavior, they are unnecessarily punishing all students for the actions of a few students (Howard, 2013). According to Garcia (2012), "many policies in place to keep students from 'being distracted' are much more about conforming to past cultural practices" (p. 432). In other words, technology usage policies are often constrained because we use discipline or rules or policies to focus on what teachers want/need instead of what problems truly exist for students (Garcia, 2012). Perhaps instead of negative wording and connotations included in a technology usage policy, schools might find it more useful to support their technology initiatives with increased efforts at teacher training and supervision of students while using technology (Deseret News, 2009).

Another constraint of technology usage policies is the fact that the task of ensuring student safety online while also providing a rich, collaborative digital learning environment is an overwhelming one to undertake alone (Futoran, Schofield, & Eurich-Fulcer, 1995). As such, Kong, et. al. (2014) urges governments to support schools with policy examples, skills training, technical support, and curriculum-planning tools. Finally, many scholars urge school districts to involve parents and community members into many aspects of implementing a personalized 1:1 technology initiative, including teaching and modeling responsible technology use and good digital citizenship skills through parent nights and other community events (Rafael, 2014).

A final constraint of technology usage policies is derived from the fact that these policies are extremely difficult to write in such a way that mediates competing values from different stakeholders. In Section 1.2: Statement of the Issues, the idea of competing values was intro-

duced. As technology is increasingly integrated into classrooms, schools are faced with the challenge of balancing the responsibility to prepare students to use current technology for learning and simultaneously keeping them safe from potential harm (Howard, 2013).

2.5: Ethical, Moral, and Legal Concerns

While many researchers have written about the benefits of integrating technology into the classroom for teaching and learning, other scholars have identified several potential moral, ethical, and legal concerns that have resulted from the surge in popularity of personalized 1:1 technology initiatives in K-12 schools (Baum, 2005). When creating technology usage policies to support the implementation of personalized 1:1 technology initiatives in K-12 schools, technology directors must be aware of these potential concerns. In the following subsections, a review of these scholars' findings as well as relevant case law will be discussed.

Ethical and moral issues. Throughout the literature, two ethical and moral issues were identified and discussed at length: (1) Who should be responsible for protecting students from inappropriate content and for teaching students proper use of technology?; and (2) Do all students have equal opportunity to learn and access technology resources? (Farmer, 2002; Howard, 2013). As schools evaluate the success of their current 1:1 technology initiatives or plan for future projects, they have a responsibility to consider how these issues might impact their students and the larger community and develop a plan to respond appropriately. In the following paragraphs, each of these moral and ethical issues will be discussed in more detail.

Who should be responsible for protecting students from inappropriate content and for teaching students proper use of technology?. Scholars agree that the school has the ethical responsibility to ensure that students are safe while physically in their care. This same argument

has been extended by many to also include the responsibility to keep kids safe in online environments as well (Howard, 2013). Specifically, school districts have an ethical obligation to control both who has access to the Internet (when used for classroom instruction) and which sites are accessible by students through content filtering (Howard, 2013).

While Crane (2004) notes that Acceptable Use Policies (AUPs) outline the need for ethical behavior by users in exchange for access to the Internet, it is important to recognize that the policy is only one part of teaching students proper use of technology. There is consensus among researchers that there is still a need to explicitly teach K-12 students about the ethical and legal use of educational technology and how to make decisions about what is right and wrong in online environments (Baum, 2005). Despite growing up in the digital age, many students are not proficient in using technology for learning. For example, young users of technology may not fully understand the implications of sharing images and information online, despite being frequent users of cell phones, e-mail, and social media (Deseret News, 2009). In fact, Baum (2005) found that "many computer-savvy kids as well as educators, administrators, and parents are unclear about what is and what is not ethical when dealing with the World Wide Web" (p. 54). As a result, Howard (2013) asserts that teachers have a responsibility to help students learn about how to navigate online environments.

Despite a widespread recognition that proper use of technology needs to be taught to all students, schools face several challenges in integrating this instruction in the curriculum. First, many schools struggle with deciding how, when, and where this instruction should be integrated into the curriculum (Baum, 2005). In today's educational climate of standardized testing, increased rigor, and standards-based instruction, educators often struggle to find time to teach anything additional. Second, teaching proper use to students will require that the teachers learn

these 21st Century classroom and workplace skills themselves (Howard, 2013). Thus, schools will need to consider how they provide professional development opportunities for their teachers (Howard, 2013). A third problem that schools commonly face is a laser-focus on cheating and plagiarism as the only ethical issue related to using technology in the classroom. While this is certainly an important topic, there is debate as to whether or not technology is even contributing to cheating. In other words, some scholars argue that this problem is not unique to technology and students who would have cheated in traditional classrooms are now simply finding it easier to do so in technology-rich classrooms (Baum 2005). Other scholars suggest the idea that the Internet has "brought about a change in core values regarding cheating" and some students might not even consider their plagiaristic actions (ex. Copying and pasting without a citation) as cheating (Baum, 2005, p. 54).

Do all students have equal opportunity to learn and access technology resources?. Howard (2013) argues that "all students have the right to become proficient in online communication platforms, not just those who can afford access to them in their homes" (p. 42). Along the same lines, the argument has been made that schools that cannot afford access or that choose to block access to these online learning opportunities are preventing their students from developing these proficiencies, thereby "leaving an element of the digital divide intact" (Howard, 2013, p. 42). Much of the research related to this issue has been focused around disadvantaged schools that are more likely to struggle with providing access to the effective use of technology in their schools (Hudson, 2004). According to an Urban Institute Study, poor rural districts face a variety of issues, including limited access to the Internet, technology, technical support, and student technology skills (Hudson, 2004). Similarly, the same study found that poor urban districts are

faced with problems such as inadequate teacher skills, building infrastructure to support access, and electrical systems (Puma, et. al, 2002, as cited in Hudson, 2004).

In an attempt to provide universal service in the networked environment, e-rate funding is awarded to schools with the highest needs (Bertot, 2000). Although e-rate was designed to address some of these inequities, studies have revealed that major disparities still exist and researchers have suggested that this is an ethical issue that still needs to be considered (Hudson, 2004). Jayakar and Park (2009) suggest that "procedural and resource constraints" such as a "complex, multi-stage application process" prevent schools with a lack of technical expertise and support from receiving this funding (pp. 54-55).

As schools and other businesses increasingly started utilizing technology, a significant problem surfaced: equitable, reliable, and affordable access to the Internet and other technology services. Recognizing this inequality, the Telecommunications Act of 1996 was created to "set forth principles of equity and access to networked services for the nation, in general, and legislated a discounted telecommunications services mechanism for libraries, schools, and rural health care institutions, in particular" (Bertot, 2000, p. 45). In response, the Federal Communications Commission (FCC) established what is commonly known as the federal e-rate (education rate) program in 1997 (American Library Association, 2011).

For schools and other institutions such as public libraries, e-rate is critical in helping them respond to the needs of their communities in "innovative and meaningful ways" by ensuring access to advanced telecommunications and information services that are necessary for 21st Century teaching and learning (American Libraries Association, 2011, p. 23). Specifically, the e-rate program offers heavy discounts to eligible schools and libraries for telecommunications services and Internet access (Ramaswami, 2008). Additionally, schools can apply for discounts

for telephone services, wireless connections, email services, and internal networking equipment (Hudson, 2004). The amount of discount that each entity receives can range from 20% to 90%, depending on the percentage of students and families from low-income families and the location of the school (urban v. rural) (Panagopoulos, 2005). It is important to note that these discounts cannot be used for the purchase of computers (with the exception of for network services), software programs, or training for teachers (Hudson, 2004).

In order to apply for e-rate, schools and libraries must submit a technology plan along with their application (Panagopoulos, 2005). This technology plan must outline how the technology will improve education and must include the following components: "clear goals and strategies for implementation, an assessment of necessary services, software, and hardware, a budget, and an evaluation mechanism that enables schools to measure progress" (Panagopoulos, 2005, p. 503). The purpose of this technology plan is to make sure that applicants have considered all of the other relevant issues that are necessary to successfully implement their plan, if approved to receive e-rate funding (Hudson, 2004). Examples of issues that must be considered are: sources of funding for other equipment and maintenance, training for teachers and students, strategies for integrating technology into the curriculum, and sustainable school facilities (Hudson, 2004). Once submitted, these technology plans are evaluated and approved by an independent state agency (Panagopoulos, 2005). Priority for funding is given to schools and other eligible entities with the greatest need (Hudson, 2004). In a 2005 study, Panagopoulos found that 90% of e-rate funds are awarded to public schools, with 70% of rural schools across the United States participating in the federal e-rate program. Because rural schools make up a majority of the schools be-

ing funded by e-rate, I chose to focus the current study exclusively on rural schools. Furthermore, the same study revealed that 95% of libraries that applied for discounts through e-rate were funded (Panagopoulos, 2005).

Another attempt at providing access to high-quality, technology-rich instruction in all schools was the Every Student Succeeds Act (ESSA) (ESSA, 2018; Mesecar, 2015). Signed into law in 2015, the ESSA reauthorized the 1965 Elementary and Secondary Education Act (ESEA) (Indiana Department of Education, 2016). While Indiana is still in the process of making decisions about how to best implement the ESSA statewide, every ESSA plan must include the following four components: (1) challenging academic standards, (2) academic assessments, (3) statewide accountability systems, and (4) school support and improvement activities (Indiana Department of Education, 2016). Through the ESSA, states and school districts are having more control over how they measure academic achievement (Mesecar, 2015). The ESSA is relevant to the current study because it provides an opportunity for states and schools to leverage educational technology (edtech) to transform teaching and learning in meaningful, engaging ways, as noted in Title IV of the law (Mesecar, 2015). The ESSA provides financial support through the student support through the Student Support and Academic Enrichment Grant Program, which could allow schools to use edtech more readily (Mesecar, 2015). Mesecar (2015) points out the "ESSA strongly encourages personalizing education, including through blended learning, as well as attempting to ensure more equitable access to technology and digital learning experiences" (p. 4). Furthermore, the ESSA strongly suggests and has provisions for supporting the extensive professional development necessary for school staff to institute such sweeping changes in their classrooms (Mesecar, 2015). In sum, the ESSA is focused on providing flexibility and funding

that can make it possible for all students in all schools to have an equal opportunity to learn and access technology devices and solid edtech instructional strategies (Mesecar, 2015).

Legal concerns. In addition to identifying potential moral and ethical issues that may arise in implementing personalized 1:1 technology initiatives, many scholars have noted the importance of identifying potential legal issues with these initiatives as well (Paska, 2012). In recent years, the courts have handed down a wide variety of rulings that have made it difficult to understand exactly what schools should be doing and not doing with regards to technology use and Internet access to their students (Howard, 2013). Fearing litigation, many school districts simply choose to "steer clear of anything that presents risks to student safety, or that may prove damaging to teacher reputations and livelihood," including providing access to the Internet or 1:1 school-issued devices (Howard, 2013, p. 41). However, this lack of specificity in the law can also be viewed positively in that it does allow school districts to be flexible in their implementation and creates an opportunity for each school district to meet their own unique local needs and interests as well (Paska, 2012). Therefore, it is critical to understand that the law is limited and is only the first step; in fact, what is more telling is how a school chooses to implement the law through policies and procedures that has more of an impact on the 1:1 initiative's success (Paska, 2012). Throughout this section, each of these potential legal issues will be identified, explored, and explained, along with reviews of case law that is relevant to each of these potential legal issues.

CIPA. As noted earlier, one of the most important pieces of legislation that educational leaders who are considering using technology in their schools need to be aware of with regards to restricting harmful content is the Children's Internet Protection Act (CIPA) (Gable, 1998). CIPA is a Federal Law that "mandates that school districts which provide access to the Internet develop

pupil access policies" (Gable, 1998, p. 3). CIPA was enacted by Congress to address concerns about the potential for children to access inappropriate content via the Internet (Federal Communications Commission, 2017). As a result, schools and libraries who receive discounts for Internet access through e-rate must comply with CIPA (Federal Communications Commission, 2017). In order to be in compliance, participating schools and libraries must create an Internet Safety Policy that includes technology protection measures (Federal Communications Commission, 2017). More specifically, this Internet Safety Policy must address the following: "(1) access by minors to inappropriate matter on the internet; (2) the safety and security of minors when using electronic mail, chat rooms, and other forms of direct electronic communications; (3) unauthorized access, including so-called 'hacking' and other unlawful activities by minors online; (4) unauthorized disclosure, use, and dissemination of personal information regarding minors; and (5) measures restricting minors' access to materials that are harmful to them" (Federal Communications Commission, 2017; Howard, 2013, pp. 44-45). Most school districts meet this requirement by adopting the kinds of technology usage policies that were described earlier in this chapter. Furthermore, CIPA also requires school districts to communicate with parents about the policies (via at least one public hearing) that they put into place to comply with the aforementioned mandate (FCC, 2017; Gable, 1998). In addition to creating student access policies, schools are also required to comply with CIPA and restrict student access to harmful content through filtering solutions in order to be eligible for e-rate discounts (Bertot, 2000).

Obscene Material. Obscene material, as outlined by Miller v. California (1973), can be defined as meeting one of these criteria: "(A) whether the average person, applying contemporary community standards would find that the work, taken as a whole, appeals to the prurient in-

terest; (B) whether the work depicts or describes, in a way patently offensive way, sexual conduct specifically defined by the applicable state law; and (C) whether the work, taken as a whole, lacks serious literary, artistic, or scientific value" (pp. 24-25). Although transmitting obscene material is already illegal under federal law, filtering is still necessary because it can help restrict access to indecent material that is merely offensive, and not illegal to transmit (Gable, 1998). Although they are not legally obligated to do so, Paska (2012) suggests that schools supplement their policies with teaching students how to safely and properly use the Internet.

COPPA and privacy rights of students. Using technology in the classroom also creates legal concerns about protecting the privacy rights of students (Kong, et. al., 2014, p. 76). As students learn and interact with others online, they are also unknowingly sharing information about themselves and their learning process (Kong, et. al., 2014). These learning processes are "recorded and retrievable on those digital learning platforms over a long period of time on a cross-platform and cross-country basis" (Kong, et. al., 2014, p. 76). As such, schools are faced with a difficult task – to allow all students access to information online while also keeping their personal information private and safe (Ramaswami, 2008). Similar to hospitals, schools are required to strictly follow local, state, and federal privacy and family protection laws (Ramaswami, 2008). To further help address some of these student privacy concerns, the Children's Online Privacy Protection Act (COPPA) was passed as a Federal Law in 2000 (Howard, 2013, p. 48). Designed to protect the privacy of children under the age of thirteen, COPPA is enforced by the Federal Trade Commission (Federal Trade Commission, 2017). While COPPA mainly applies to businesses that collect information from students online while using their products and services, schools have a responsibility to make sure that the companies with whom they interact are COPPA Compliant (Federal Trade Commission, 2017; Howard, 2013). In providing guidance

to these businesses, the Federal Trade Commission has outlined six steps with which they must comply: (1) determine if their websites are collecting personal information for students under age thirteen; (2) post their privacy policy; (3) notify parents directly before collecting personal information from their kids; (4) get parents' verifiable consent to collect information; (5) honor parents' rights with respect to their children's personal information; and (6) implement reasonable procedures to protect the security of children's personal information (Federal Trade Commission, 2017). For schools, this means that they also are required to obtain "verifiable parental consent" prior to "the collection of personal data from children under the age of 13" (Howard, 2013, p. 48).

On a related note, Danzig (2000) suggested that student privacy rights with regards to students' access to and use of the school district network was important for school districts to consider due to the sheer complexity of the issue. For example, whether or not students have an expectation of privacy while using the school network is dependent on the following factors: "(a) how the district structures Internet services; (b) what the district tells students about their rights to privacy; and (c) the expectations of privacy that relate to specific uses of the Internet" (Riker Danzig, 2000, p. 6). In considering whether or not a school district is legally permitted to search students' online files, Riker Danzig (2000) referenced *New Jersey v. T.L.O.* (1985) to remind schools that a search of this kind must be "justified at its inception" and must be "reasonably related in scope to the circumstances which justified the interference in the first place" (p. 341).

Equal access. The topic of equal access was introduced in the previous section about ethical and moral issues; however, equal access also presents potential legal concerns about which educational leaders should be considering (Futoran, Schofield, & Eurich-Fulcer, 1995).

The Equal Protection Clause of the Fourteenth Amendment mandates that states (and their agencies) treat similarly situated individuals similarly (Const. Amend. XIV, 1868; Cornell University Law School, 2010). Many legal scholars have implied that the Equal Protection Clause should also be applied when deciding whether or not all students have equal access to the Internet and technology while at school (Farmer, 2002). Most commonly, this topic arises within student disciplinary matters and the administrator's decision to lose access to technology as part of a punishment or consequence for unacceptable behavior. However, the problem is that it can be extremely difficult or impossible to provide a reasonable substitute for access to technology, especially in classrooms where teachers are using technology in "transformative" ways (Futoran, Schofield, & Eurich-Fulcer, 1995, p. 235). As our society and educational systems move increasingly toward teaching, learning, and working with technology, leaders must consider whether or not there is truly an educational substitute for using the Internet and technology in school (Futoran, Schofield, & Eurich-Fulcer, 1995).

Special Education. Although school officials are generally already well-versed in the basic tenets of federal special education legislation such as Individuals with Disabilities in Education Act (IDEA) and the Americans with Disabilities Act (ADA), many scholars are advising schools to develop specific policies and procedures to safeguard themselves and to ensure that students with disabilities are receiving all of the appropriate modifications, accommodations, and related services when participating in online learning opportunities that they would normally receive in a traditional classroom (Burdette, Greer, & Woods, 2013). Indeed, scholars have stressed the need for school personnel to become legally literate on basic special education legal matters (Umpstead et al., 2015). Gronseth et. Al (2010) remind schools that under the Individuals with Disabilities Education Improvement Act of 2004 (IDEIA), they are required to ensure

that students with disabilities are provided with all necessary assistive technology and accommodations, as determined by a child's Individualized Education Program (IEP) Team. The major legal concern is that of making sure that students with disabilities "receive all the educational benefits afforded by the technology in an equally effective and equally integrated manner" (Burdette, Greer, & Woods, 2013, p. 66). Related to special education services, Burdette, Greer, and Woods (2013) listed four legal issues that have already emerged from moving towards learning in online environments: (1) the quality of the special education services is often lower than that received in traditional classrooms; (2) many schools are not following students' IEPs in the online setting; (3) schools are having a hard time defining a Least Restrictive Environment (LRE) in an online environment; and (4) some schools have been illegally asking students' parents to revoke their special education services in order to gain access to online learning environments (Burdette, Greer, & Woods, 2013). Furthermore, Gronseth et. Al (2010) also raises a concern that the lack of teacher training and experience with using technology with students with disabilities is prevalent and might impact the quality of instruction that students with disabilities receive, as compared to their peers without disabilities.

Criminal Acts. Another potential legal issue for schools to consider is how they will deal with students who not only violate their usage policies, but who also commit criminal acts, sometimes unintentionally (Deseret News, 2009). While schools are limited by their policies, it is important for schools to be aware of the potential legal consequences for students who commit crimes online so that they can help to educate them (Deseret News, 2009). By far, the most commonly discussed criminal activity by minors using technology throughout the literature is that of students sharing pornographic material, such as nude or lewd photos of themselves and other minors, with each other (Deseret News, 2009). Known as "sexting", this consensual practice has

become a common way for teens to flirt with each other (Oluwole & Green, 2013, pp. 2-4). Although psychologists recognize sexting as a typical behavior for hormonal teenagers, the consequence of participating in these behaviors can be extreme, resulting in possible felony records and sex offender registrations (Oluwole & Green, 2013). Society must consider the implications of the laws that are currently in place because they are designed to punish adults who are committing these crimes, not minors who may or may not even recognize that their actions are criminal (Deseret News, 2009). Furthermore, Oluwole and Green (2013) argue that adults would be outraged if they were prosecuted for sending consensual nude photos to other adults, citing their First Amendment right to freedom of speech; in contrast, minors who participate in this same behavior with their peers are prosecuted with child pornography charges, without considering their same First Amendment rights. For example, a teenage boy who sends a nude photo to his teenage girlfriend could face felony charges and could be required by law to register as a sexual predator for the rest of his life (Deseret News, 2009). In realization of this, some states like Vermont have started discussing the idea of special exemptions for 13-18 year olds who are convicted of such crimes (Deseret News, 2009). Because of the potential serious legal, academic, and disciplinary consequences of sexting, McEachern et. Al (2012) offered the following advice to school leaders and counselors about how to prevent and respond to incidents of sexting in their schools: (1) provide interventions, (2) develop school district internet use policies, and (3) educate parents, teachers, and students on the dangers of sexting (pp. 1-2).

Student speech. Yet another frequently cited legal issue related to students using technology was that of balancing students' free speech rights under the First Amendment and the need for censorship for safety and security (Crane, 2004). Osborne and Russo (2012) described

the challenges that schools face in having to make decisions that the law has not adequately addressed. Without legal precedents or clear guidance for how they should act, many school leaders struggle with how to regulate student speech using technology (Osborne & Russo, 2012). While students do have a right to freedom of speech and expression, their First Amendment rights are given special context and consideration in school settings (McCarthy, 2014).

Much of the litigation on student cyberspeech issues is brought forth when school leaders "discipline students for derogatory, defamatory, lewd, and threatening items students have posted about teachers, administrators, and classmates on social networking sites such as MySpace and Facebook" (Osborne & Russo, 2012, pp. 1-2). Gable (1998) points out that "broad prescription" would violate the First Amendment rights of students and in fact, some indecent speech may actually have value in certain classes and research-based learning experiences (p. 3). Although there is no Supreme Court guidance on this matter, several courts have sided with students in cases where school administrators could not prove that the offensive student speech, including on-campus and off-campus cyberspeech, caused "a disruption to the educational process" (Osborne & Russo, 2012, p. 5), but school districts have certainly prevailed when disruption is present (see *Bell v. Itawamba County School Board*, 2015). In *Bell v. Itawamba County School Board* (2015), a student in Mississippi, was suspended for creating and posting a recording of a rap on his publicly accessible Facebook and Youtube Accounts because it contained what the school board described as harassing, intimidating, and threatening statements against two teachers in the district. In this case, the Fifth Circuit ruled that school officials can restrict student off-campus speech without infringing on students' First Amendment right to Freedom of Speech in cases where the speech contained threatening, intimidating, and harassing statements against school staff that could reasonably lead to a substantial disruption to the school environment (*Bell*

v. Itawamba County School Board, 2015). Furthermore, courts have also ruled in favor of students when they determine that policies or handbooks are "unconstitutionally overbroad and vague" (Osborne & Russo, 2012, p. 6).

Off-Campus behavior. Due to the lack of a Supreme Court case that addresses student internet speech, Tinker v. Des Moines Independent Community School District (1969) is frequently relied upon when determining if school officials can curtail off-campus speech. This Supreme Court case was influential for establishing the following precedents: (1) Students are persons under the US Constitution and have rights under the First Amendment to Freedom of Speech; (2) Teachers and students do not give up their rights to freedom of expression or speech at the schoolhouse gate; and (3) In order to discipline students for speech, they must be able to show that a "material or substantial disruption occurred or that the potential for disruption was reasonably foreseeable" (Tinker v. Des Moines Independent Community School District, 1969, p. 505).

A case that applied *Tinker* and addressed the issue of discipline for off-campus behaviors of students was *Layshock v. Hermitage School District* (2011). In this pivotal case, a student in Pennsylvania used his grandmother's computer during non-school hours to create a fake profile for the principal on a social network site (Osborne & Russo, 2012). The profile was unflattering in nature and the student who created the site decided to share the site with other students at the school and even used a school computer to show other students (*Layshock v. Hermitage School District*, 2011). In response, the school suspended the student for ten days. Ultimately, the Third Circuit Court of Appeals held that the student's free speech rights were violated since there was not a "foreseeable or substantial disruption of the school" (*Layshock v. Hermitage School District*, 2011, p. 36). The biggest takeaway from *Layshock v. Hermitage School District* (2011)

is that the courts are not comfortable with allowing schools to discipline students for their behaviors in the home unless such a disruption occurs. While this standard seems straightforward, Howard (2013) points out that "cyberspace is not really a 'place', [so] it is not always clear where, exactly, the infraction occurred" (p. 47).

Cyberbullying. Although bullying has been an issue for years, schools have experienced an increase in incidents of cyberbullying, largely due to advancements of technology and devices (Herrera, Kupczynski, & Mundy, 2015). As such, schools are now having to both learn how to use technology for teaching and learning, while also focusing on developing policies to help protect their students from harm (Broderick, 2016; Ford, 2009). One such example from case law is that of Kowalski v. Berkeley County Schools (2011), in which a student from West Virginia was suspended for 10 days for harassing another student online. In this specific case, the student used MySpace to create a discussion group in which she ridiculed a classmate and invited 100 of her peers to join (Kowalski v. Berkeley County Schools, 2011). The Fourth Circuit ruled in favor of the school and upheld the suspension, observing that the school's administrators needed to be able to prevent and punish incidents of harassment that are directed at other students "inside the schoolhouse gate" (Kowalski v. Berkeley County Schools, 2011, p. 21). Kowalski also highlighted that student speech could also be limited under Tinker's second prong, which prohibits speech that interferes with the rights of others.

Applying the standard set forth in *Bethel School District No. 403 v. Fraser* (1986), school boards can regulate speech that is considered "lewd, vulgar, indecent, and plainly offensive speech in school." Thus, it could be argued that the school might have greater responsibility and oversight into student speech directly related to learning activities online that involves lewd and

vulgar speech. Also, *Fraser's* applicability to off-campus speech remains in flux (McCarthy, 2014).

Student work as a representation of the school. Yet another potential legal issue related to student speech pertains to classroom work that students publish online. In Hazelwood School District v. Kuhlmeier (1988), the Supreme Court held that schools were permitted to choose not to promote certain speech in school-sponsored activities and publications. However, Futoran, Schofield, and Eurich-Fulcer (1995) also discuss the idea of responsibility for student-authored work online that reflects poorly on the school district, such as a work that is deemed inappropriate; in other words, they question whether or not schools are liable for these student publications that are not formally school-sponsored, but that are written for assignments or other learning activities while at school.

Filtering. A final potential legal issue related to student speech using technology is focused on the idea of filtering (Flowers & Rakes, 2000). Flowers and Rakes (2000) argue that schools should be careful in filtering and restricting students' access to information via the Internet because they need to balance considerations about safety with those of students' rights to freedom of speech and information. In addition to First Amendment concerns, schools that filter and restrict content should be careful not to violate students' rights to equal access in a society that is starting to view the Internet as a right instead of a privilege (Flowers & Rakes, 2000).

In 2010, New York State passed the Dignity Act to "provide the state's public elementary and secondary school students with a safe and appropriate environment free from discrimination, intimidation, taunting, harassment, and bullying on school property, a school bus, and/or at a school function" (Paska, 2012, p. 8). While many states have similar legislation in place to gen-

erally address bullying, New York's Dignity Act also specifically requires schools to (A) respond to cyberbullying when it occurs, (B) create and implement protocols to deal with cyberbullying, and (C) ensure that teachers and other school employees are trained on how to handle issues related to cyberbullying (Paska, 2012). Unfortunately, many schools are not implementing such a comprehensive program and are instead choosing to respond to this increase in cyberbullying by merely adopting technology usage contracts that shift the blame away from the school and directly onto the parents or students (Ford, 2009). Of course these cyberbullying policies do not always seem to align with some of the current court opinions that generally require that a substantial disruption at the school occurs before a student can be disciplined for online speech (see McCarthy, 2014).

Legal challenges of using technology usage policies. In response to the potential legal issues and responsibilities that schools are confronted with when introducing technology into their classrooms, many school leaders have opted to adopt and implement technology usage policies to help them outline appropriate behaviors (Ford, 2009). Despite good intentions, many scholars have expressed concern about the legality of such internet and technology usage contracts, raising questions about who is really responsible when students violate these policies (Ford, 2009). Several contract law arguments related to technology usage contracts between students, parents, and the schools themselves are outlined in this section.

One major argument against the legality of technology usage contracts is the idea that the children that are being required to sign these documents are not of "the age of majority" and therefore, some legal scholars argue that these contracts are thus "voidable" (Ford, 2009, p. 2). By their nature, minors are I, and these internet usage contracts can present "an unequal bargain-

ing power" in favor of school officials (Ford, 2009, p. 2). The primary purpose of student technology usage contracts is to get the students to accept responsibility for their actions online and to release the school from liability (Ford, 2009). Often in the form of pop-up windows or policies in student handbooks, technology usage policies are frequently not read or understood fully by students (Ford, 2009). While schools can enforce these contracts, Ford (2009) argues that the contract is no longer valid if the contract is "prejudicial against the minor, repudiated by the minor, or not beneficial to the minor" (p. 2). If a student decides not to agree to the terms of the usage contract, they are denied access to the Internet and technology that is essential for learning in today's society, thereby raising questions about equal access to educational opportunities (Ford, 2009).

A second major argument against the legality of technology usage contracts is the idea that parents generally cannot legally "contract away the rights of their children" (Ford, 2009, p. 3). Students are individuals and as such, they should have some say in what happens with their rights and the things that they consent to (Ford, 2009). Schools often require parents to sign these Internet and technology usage contracts, thereby agreeing to not hold the school liable for their students' activities online (Ford, 2009). If a parent does not sign the contract, many schools will not allow the student to access the Internet or use electronic devices for learning at school (Bellamy, 2009). Ford (2009) makes a comparison between technology usage contracts and interscholastic sports agreements in schools, arguing that parents are unknowingly signing these agreements without questioning their legality because they want their child to be able to participate.

Yet another major legal argument is the idea that technology usage contracts violate a school's "fiduciary duty" to its students by shifting the liability to parents and students (Ford,

2009). Since schools chose to introduce the technology into their schools, it is reasonable to assume that the schools themselves "could have reasonably foreseen" possible risks, and as such, the school could be held liable for what students do at school (Ford, 2009, p. 3). Since courts have "traditionally disfavored contractual exclusions of negligence liability", schools are urged to consider addressing the true underlying problems that necessitate these contracts in the first place through programs such as cyberbullying prevention, teacher training, digital citizenship for students (Ford, 2009, p. 3). However, if technology usage contracts are merely used to keep schools from being held liable, there is no real incentive for schools to implement these kinds of programs, which can be costly (Ford, 2009, p. 3).

2.6: Identifying Gaps in the Existing Body of Literature

To add to the existing body of research on 1:1 personalized technology initiatives in Indiana, K-12 public rural school districts, more research needs to be done to better understand how technology directors organized and manage such initiatives through technology usage policies. The existing body of literature consists primarily of studies from 5-10 years ago. This study will provide a much-needed update to the current body of literature while also describing the larger context of the current educational climate in Indiana. There has been a great deal of research about technology usage policies in general; however, these policies have not yet been studied from the perspective of the technology directors who write, implement, and enforce these policies. The current body of research also lacks a focus on examining why such technology usage policies are implemented in school districts, aside from being compliant with legal mandates in federal legislation such as CIPA.

As mentioned in the previous paragraph, much of the existing literature focuses on the need for having general technology usage policies in place in schools. The vast majority of the research related to technology usage policies in schools emphasizes the need to protect students from harmful content online. Furthermore, the existing literature provides ample information about potential legal, moral, and ethical issues around technology usage policies, but this is largely based off of theory and the opinions of scholars rather than on empirical studies. Although a few researchers have studied acceptable use policies (AUPs) and described policies that resemble responsible use policies (RUPs), the current study was designed to fill gaps in the existing literature by explicitly studying empowered use policies (EUPs) as well. Of the research that has been conducted on technology usage policies, very little importance or focus is placed on analyzing the actual text of the policies themselves. This study will help to fill this gap in the literature because it employs the research strategies of content analyses and emergent coding to identify key words, phrases, and ideas that are common in such technology usage policies.

Likewise, there is very little research that compares the three main types of technology usage policies and almost none of these studies examine this issue from the perspective of the technology director in school districts, who are pivotal in applying for e-rate, complying with CIPA, and developing/implementing such technology usage policies. Through semi-structured interviews with technology directors, this study will contribute to the larger body of research by using technology directors' perspectives to identify and explain policy trends that are occurring throughout the state of Indiana in K-12, rural, public school districts that have adopted personalized 1:1 technology initiatives.

Finally, most of the research that has been conducted on this topic has been non-empirical (with the exception of the studies in Section 2.1 about rural schools, which were mostly quantitative in nature, with data primarily being collected through surveys). In other words, the vast majority of the body of existing literature was contributed by scholars and experts in the field who based their research and publications on theory and beliefs rather than on data collected through empirical research methods. The current study will address these large gaps in the body of literature by contributing empirical data, collected through the qualitative methods described in the next chapter.

Chapter Three: Methodology

3.1: Introduction and Research Questions

As discussed in Chapter 1, public K-12 school districts in Indiana are increasingly moving toward implementing 1:1 technology initiatives (Indiana Department of Education, 2015). Although the reasons for such initiatives vary widely (e.g. competing for student enrollment, raising test scores, increasing student achievement, or equipping students with the ICT skills they need after high school), one thing that most school districts with a 1:1 program have in common are technology usage policies that outline how students should interact with school-issued devices. Keeping this in mind, I designed this study to identify policy trends and other legal and ethical issues that are associated with designing, implementing, and supporting a 1:1 personalized technology initiative with technology usage policies in rural, K-12, public schools in Indiana.

The purpose of this study is to research and analyze the policy trends that currently exist in K-12 Indiana school districts with a personalized technology initiative and technology usage

policy in place. Because technology leaders in K-12 schools are generally responsible for all facets of technology initiatives within their district, this study was designed to further explore technology directors' perceptions about these policies and their purpose in choosing one policy over another. This study was also designed to identify technology directors' perspectives about the essential conditions to support polices and the constraints of those policies. Finally, the current study identified the potential ethical, moral, and legal challenges that technology directors were most concerned about.

More specifically, the current study addressed the following research questions:

1. How did technology directors choose their type of technology usage policy and what was their purpose for selecting that type of policy?
2. What are some of the essential conditions to support technology usage policies in schools and what are some of the constraints of those policies?
3. What are the perceptions that technology directors have about the ethical and legal implications of their technology usage policies within the context of implementing a personalized 1:1 technology initiative in their districts?

In order to best address the ethical, policy, and legal concerns surrounding the adoption of technology usage policies in rural, K-12 public school districts with a 1:1 technology initiative in Indiana, I conducted a qualitative study consisting of interviews of technology directors and content analyses of technology usage policies. This chapter provides an explanation about why this particular research approach was selected. Section 3.2 provides an explanation of the qualitative design of this study. Section 3.3 further describes the data collection process and data analysis protocol employed. Section 3.4 identifies the limitations and strengths of the current

study's methodological design. Finally, Section 3.5 provides an overview of the timeline for this research study.

3.2: Qualitative Design of this Study (Research Method)

As described in Section 3.1, the research questions from this study necessitate a qualitative approach, consisting of a combination of in-depth, semi-structured interviews with technology directors in rural, public, K-12 schools in Indiana with established 1:1 initiatives in place and a content analysis of the specific technology usage policies in each participating school district. It was through a combination of these two qualitative methods that the three research questions were best answered. Both the interviews and document content analyses provided for an in-depth analysis of this issue, as described in more detail in Chapters 4 and 5.

More specifically, the first research question related to the types of technology usage policies adopted by school districts was answered through semi-structured interviews with technology directors and a content analysis of each participant's technology usage policy. I began by obtaining copies of the technology usage policies in each of the participating school districts and conducting a content analysis of those policies, with the purpose of identifying common themes, rules, and policies/procedures inherent in all eleven school districts' policies. Most school districts publicly post these technology usage policies on their publicly viewable school websites. Therefore, I began the process of obtaining these policies by searching on each school district's website. However, these policies were not as easy to locate as I initially thought. As a result, I also emailed each of the technology directors in the participating districts to request a copy of these technology usage policies. All eleven participants responded by emailing a copy of their policies to me. In addition to highlighting the commonalities among policies, I also used the content analysis portion of the current study to answer the first research question by identifying

whether each policy had characteristics of an acceptable use policy, responsible use policy, or empowered use policy. These content analyses also helped me to address the second research question by identifying supporting language to indicate the presence or absence of any of the essential conditions for supporting technology usage policies, as well as the third research question by noting any ethical or legal language that was intentionally present in each policy studied. After studying these technology usage policies, I focused on conducting in-depth, semi-structured interviews with the technology directors in each of the participating rural school districts. I then used these interviews to complement the data collected in the content analyses of each policy, as described above. Finally, I concluded the research study by utilizing the data collected from the content analyses and the interviews and the trends identified in the current body of research (see Literature Review in Chapter 2) to further examine how aware technology directors were about the policy, ethical, and legal concerns raised in the third research question.

3.3: Methodology Rationale

Due to the nature of the research questions driving this study, I utilized a qualitative methodology. Although there are limitations in conducting a qualitative research study, in this instance, the strengths of using such a research strategy far outweighed the limitations. Qualitative research is commonly used in fields such as education and other applied sciences because it allows researchers to "engage in systematic inquiry" about their practice (Merriam, 2009, p. 1). Like other educational practitioners, I selected a qualitative design because of the following strengths of such a methodology: (1) Qualitative research allows for description of contextual and setting factors; (2) Qualitative research can shed light on how participants interpret certain

constructs; (3) Qualitative research lends itself to exploring how and why a phenomenon occurred, based on the participants' own words; and (4) Qualitative research provides the reader with a detailed understanding and description on an insider's viewpoint (Merriam, 2009).

In designing the current study, I decided to utilize interviews in order to learn more about technology usage policies that cannot simply be observed by reading the documents themselves or observing the behavior of school staff members using technology in a 1:1 environment. In fact, one of the biggest strengths of this study's methodology is the rich context and quality of information that will be obtained regarding technology directors' perspectives of technology usage policies.

Patton (2002) describes the strengths of incorporating interviews in a qualitative research study this way:

> We interview people to find out from them those things we cannot directly observe...We cannot observe feelings, thoughts, and intentions. We cannot observe behaviors that took place at some previous point in time. We cannot observe situations that preclude the presence of an observer. We cannot observe how people have organized the world and the meanings they attach to what goes on in the world. We have to ask people questions about those things. The purpose of interviewing, then, is to allow us to enter into the other person's perspective. (Patton, as qtd. in Merriam, 2009, p. 88)

Furthermore, I chose to strengthen the current study's design by also including a content analysis of documents (namely technology use policies). A content analysis is "the process of organizing information into categories related to the central questions of the research" (Bowen, 2009, p. 32). By selecting a content analysis, I was able to go beyond identifying themes; rather, I was able to describe "the frequency and variety of messages" in addition to the number of times

key phrases are used throughout these technology usage policies (Merriam, 2009, p. 205). Including a content analysis of technology usage policies allowed me to "discover and describe the focus of individual, group, institutional, or social attention" (in this case, of each school district in the study) by making inferences by "objectively and systematically identifying specified characteristics of messages" (Stemler, 2001, p. 1). Documents have immense value in adding to a research study; as such, the researcher used a content analysis of the technology usage policies in this study to (1) provide context, (2) suggest questions that need to be asked during the interviews, (3) provide supplementary research data to provide additions and valuable insights, (4) track the changes and developments of policies over time (when multiple versions were available), and (5) verify the findings and/or corroborate the statements from technology directors about their technology usage policies (Bowen, 2009).

Some of the major strengths of including a content analysis of documents into a qualitative research study are: (1) documentary material is stable; (2) documents are considered "objective"; (3) documents are often easily accessible, free, and provide information that the researcher would not be able to fully obtain from an interview or observation alone; (4) it is an efficient method because involves data selection rather than data collection; (5) it provides exactness in the research process by providing exact details that are helpful in informing the study (Bowen, 2009; Merriam, 2009, p. 155). Another strength of using a conventional content analysis method is that coding categories come directly from the texts themselves, thereby reducing researcher bias and influence (Hsieh & Shannon, 2005). Because the documents being examined in the current study are publicly accessible and produced by the school districts themselves, there is no concern about authenticity and/or accuracy. Additionally, a content analysis strengthened the

current study because the data collected can be "corroborated using other methods of data collection" such as the interviews with the technology directors in this study (Stemler, 2001, p. 1).

3.4: The Current Study's Data Collection and Analysis

For the purpose of the current study, I focused on eleven rural, public school districts in Indiana. I originally planned to study only eight school districts, but as the study progressed, I moved to include more districts as needed until I reached saturation in order to gather a sufficient representative data sample. Furthermore, I selected at least two school districts from each of the following geographic areas within Indiana: north, central, and south. I chose to determine my target population based on geographic locations first because I wanted to study a variety of locations across Indiana in order to reduce sampling bias from one area of the state. In designing this study, I drew from my personal and professional experiences with schools across the state to gain a better understanding of the population to be studied. From these experiences, I knew that each region (north, central, and south) of the state had slightly different viewpoints, ideas, values, and priorities when it comes to education and using technology for teaching and learning. Since one of my overall goals of this study was to analyze trends in policies and technology directors' perspectives, I intentionally designed the current study to span geographic boundaries in order to provide findings that are relevant to K-12 technology directors across the State of Indiana. In sum, the rationale for this geographic variety in selection of school districts was to ensure an accurate assessment of technology policy trends across the entire state of Indiana, in rural schools.

Participants. In order to achieve the desired distribution of school districts, I used publicly accessible data through the Indiana Department of Education's Office of eLearning to obtain a complete listing of all school districts in Indiana that are currently participating in a 1:1

implementation program. From this list, I used the Indiana Department of Education's 2018 Tech Plan Data to identify whether each school district was classified as urban, suburban, or rural. From this data set, all urban and suburban schools were removed from the potential participant pool, ensuring a focus only on rural school districts. Using a map, this data was even further sorted into geographic location (north, central, south). Next, schools without a 1:1 technology initiative in place were removed from the list of potential participants since this study is interested only in schools with such a program in place. After the potential participants were narrowed down based on these factors, I eliminated any school districts with whom I worked and supported as their Director of Innovative Learning at the time of this study. As their Director of Innovative Learning, I often help school districts write or revise their technology usage policies. These schools were ineligible to participate in this study due to a potential for researcher bias and subjectivity. Likewise, I removed all schools that I had previously worked with on their technology usage policies in an effort to remain objective and limit my own bias and influence on the data collected in this study.

From this data set of potential participants, I began to recruit participants for the current study. Since I used my expertise and special knowledge to select potential participants to accurately represent rural, K-12, Indiana public schools with a 1:1 technology initiative in place (e.g. sorting by geographic location and eliminating participants based on tech plan data and their relationship with me), I employed a purposive sampling method. I began to recruit participants by emailing all potential participants from the data set described above, asking for volunteers. In this email, I briefly introduced myself, described an overview of the study, explained the purpose of the study, and outlined participant requirements. I also attached my approved IRB study sheet (IRB Study #1501432180) for their reference. As the study progressed, I was selective in my

participants in order to ensure a distribution from each geographic region of the state (e.g. participants from each geographic location – 4 from northern Indiana, 3 from central Indiana, and 4 from southern Indiana). While recruiting participants, I was unable to secure enough participants through email alone, so I leveraged professional relationships I had through Indiana University and Five-Star Technology Solutions to contact and recruit additional participants from the aforementioned data set of potential participants. Once a personal introduction was made, I followed the procedure described above for emailing and recruiting participants. Participation in the study was completely voluntary and participants did not receive payment for their participation. Throughout the data collection process, there were a few instances in which the selected school districts did not meet the requirements of the study. In these situations, I simply repeated the aforementioned selection process until I had enough qualified participants.

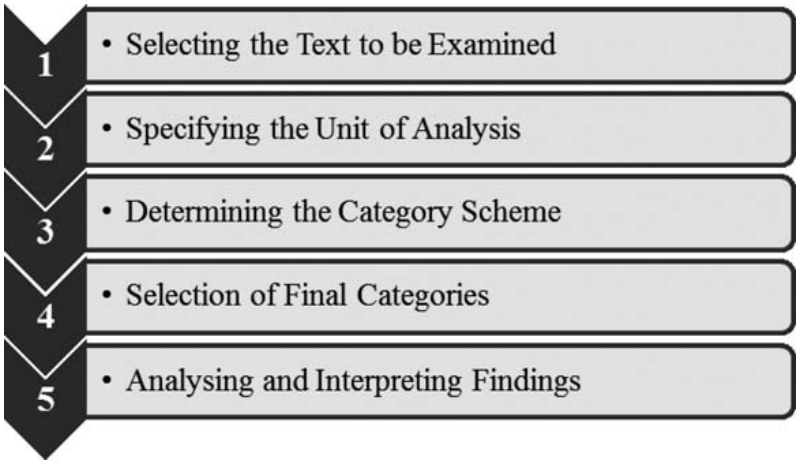
In Chapter Two: Literature Review, I noted that many school districts allow a committee of representatives from the school district to develop most technology usage policies (Crane, 2004). Although this is the case, the technology director in each school district is usually in charge of leading that group and is ultimately is charged with implementing and enforcing these technology usage policies. Therefore, I chose to narrow my focus to interviewing the technology directors themselves, as opposed to interviewing the entire committee in each school district. In order to be considered for inclusion in the study, the participants had to meet the following criteria: (1) work currently as a technology director; (2) be employed by a rural, K-12 public school district in Indiana; (3) be responsible for overseeing the design and implementation of a current 1:1 technology initiative within their current school district; (4) prepare and submit their school district's annual tech plan to the Indiana Department of Education; and (5) play an active role in

the development, adoption, review, or updating of their schools district's technology usage policies. It should be noted that in some smaller rural school districts, there is not a "technology director"; rather, there is sometimes a "technology coordinator" or "technology integration specialist" who performs the same job responsibilities as a traditional "technology director." In this study, one participant held this "technology integration specialist" title, but was included intentionally because this individual oversaw all aspects of their school district's 1:1 implementation (including the creation and updating of technology usage policies).

Content analysis of technology usage policies: Data collection. To begin the first stage of my research, I obtained a written copy of each participating districts' technology usage policies (via the districts' website and/or via email from the technology director in each district), and performed a content analysis of each policy to compare themes and common trends. While conducting this study, I learned that emailing the technology directors for these policies was much more effective than simply searching for these policies online due to the fact that these policies can take many forms. For example, some schools only had a stand-alone technology usage policy, while others incorporated their policies into a larger document such as a parent/student/staff handbook. When technology usage policies were included in larger documents, such as handbooks, I ignored the bulk of the text and only focused on the technology usage policy itself, while making a note of its location within the handbook. Still other districts also used handouts, presentations, and classroom instruction pieces to supplement their technology usage policies – all of which were important to analyze in this study. In other words, asking the technology directors for their technology usage policies allowed me to get a more complete policy perspective – especially about the purpose these policies served in their schools as well as how such policies

were communicated and implemented. Figure 3.1 below shows a general overview of the process that I used to conduct the content analyses in this study.

Figure 3.1: Overview of A Basic Content Analysis (Nasir & Binnur, 2011)



Content analysis of technology usage policies: Data analysis. I chose this method for my study because the fundamental purpose of a content analysis is to examine spoken or written material by breaking it down into "specific and meaningful categories"; doing so allowed me to use these categories to make inferences about policy trends that currently exist among rural, public, K-12 schools in Indiana (Holsti, 1969; Krippendorff, 1980; Weber, 1990). After obtaining copies of these policies, I approached the content analysis of technology usage policies by "coding raw data" and "constructing categories that capture relevant characteristics of the documents' content (Merriam, 2009, p. 205). More specifically, I used grounded theory in order to identify patterns and categories to help interpret and analyze the data (Jones, 1985; Mayring, 2000; Patton, 1990). Grounded theory allowed me to ground my analysis in the data itself through a coding process to identify ideas and theories that emerged from the data collection and analysis (Jones, 1985; Mayring, 2000; Patton, 1990). Furthermore, I used the method of inductive analysis to: (1) break apart the data and (2) make connections between the identified categories

(Strauss & Corbin, 1998). In the following paragraphs, I will describe the specific steps that I took in conducting a content analysis of technology usage policies in more detail.

Before beginning the process of collecting technology usage policies, I used my research in the literature review of this study (Chapter 2) to identify a list of potential codes (themes, key-words, ideas, and phrases) that were likely to be present in most technology usage policies. In developing these initial categories and coding schemes, I used an inductive approach because I used these categories to draw inferences about the content of these technology usage policies (Strauss & Corbin, 1998). I then used this initial list of categories to "pre-test" the coding scheme on a sample technology usage policy that was not included in the data set. I did this to test the usefulness and reliability of the coding scheme that I developed. This was important to do before using it to code the policies actually being included in the current study so that adjust-ments could be made, if necessary.

After an initial list of potential codes had been developed and had been pre-tested, I gath-ered the technology usage policies from each participant's school district so that I could begin the content analysis of these policies. By gathering these policies together, I prepared the data by making sure that the policies were in written and complete form and that they were either (A) publicly accessible via the school district's website or (B) were emailed directly to me by the participant himself/herself. Next, I began the content analysis by simply reading through each technology usage policy. After an initial reading of all policies collected, I went back through and re-read each individual policy again. This time, however, I read with the intention of deter-mining whether or not each policy was an AUP, RUP, or EUP. Throughout this second reading, I made notes in the margins to help me explain why each policy should be labeled as an AUP, RUP, or EUP (based on the body of research and definitions of each policy presented in Chapter

2: Literature Review). I also made notes about whether or not the tone or the content of the policy itself led to its identification as one of these three types of technology usage policies.

Now that the policies were identified as either an AUP, RUP, or EUP, I reorganized them into like groups. I then read the policies in each policy type a third time. This time, however, I began the process of coding the data into words, phrases, themes, etc. While I started with the initial list of categories identified from research related to my second research question on potential legal and ethical issues, I added categories as they emerged within the policies being analyzed (emergent coding). After completing the initial coding, I reviewed the categories and determined which categories could be combined, if any. While completing this third reading of the technology usage policies, I was mindful to consider the message of the policies (what was being said), the sender of the message in the policies (how it was said and by whom), and the audience (who the policy was intended for) (Miles & Huberman, 1994).

Once this coding was completed, I applied grounded theory to demonstrate that a replication of the study could be used to avoid the idea of doing the coding post hoc or using circular reasoning (Glaser & Strauss, 1967). I did this by re-reading the policies a fourth time and re-coding them a second time. Finally, I used peer debriefing to further assess the consistency of coding employed in the study, which helped to add credibility to the study (Lincoln & Guba, 1985). Peer debriefing was employed in this study because it allowed me to check my own perceptions and biases, while providing me with multiple ways to identify codes and interpret the data. Specifically, I asked a peer debriefer to review my coding and findings in order to identify any potential blind spots and to evaluate whether my findings were supported by the data analyzed. In order to do this, I provided the peer debriefer with copies of all of the technology usage policies, transcripts of the interviews with technology directors, and a list of codes that I used.

Then, I asked the peer debriefer to select small excerpts from each of the participant's interviews and technology usage policies (roughly one page for each participant). The peer debriefer then used the provided list of codes to independently code the data in the excerpts he selected. After he coded the data, we met to compare our data and coding strategies. Our coding was almost identical in nature. After comparing our coding of these excerpts, I reviewed all of my raw data and coding methods with my peer debriefer. After reviewing my work and hearing my rationale, he agreed with my methodology, findings, and data analysis. Overall, he neither offered any suggestions for improvement nor identified any discrepancies in my data analysis.

After all of this was completed, I began to analyze the coding by measuring the frequencies of the categories in each policy studied. These frequencies were important (via tally sheets) in helping identify important themes, topics, and ideas that were present in these policies. It was also useful for drawing inferences about the connection between these categories/themes. It is important to note that I used both manifest (words/phrases counted) and latent (deeper meaning behind those words/phrases) approaches in my content analysis (Neuendorf, 2017). By blending these manifest and latent approaches together in my content analysis, I was able to take note of the frequency of a concept and stay close to the facts while also being able to report the frequency of what those words/phrases actually meant or suggested.

Semi-structured interviews of technology directors: Data collection. After conducting a content analysis of each participant's district's technology usage policy, I began the second stage of my research: semi-structured interviews with me via Redbooth (an online video conferencing tool that allowed me to record the interviews). These interviews were recorded (with permission) to allow me to transcribe the interview. Initial interviews were approximately 45 minutes in length (not to exceed one hour). I also contacted participants via email after the initial

interview to conduct a mini follow-up interview (less than 30 minutes, via Redbooth), in such cases that other questions arose during the course of the data collection process. In order to ensure that I accurately interpreted the data that I collected during these interviews, I also employed the strategy of member checks by soliciting feedback (via email) from the participants in the interviews after the transcriptions were completed (Merriam, 2009). These member checks allowed me to confirm accuracy and to verify my interpretation of what each participant meant by what they said during their interview (Creswell, 2012). Although participants were asked to participate in member checks, participants were not able to change the entirety of their interview and were not allowed to compare their responses to other technology directors' responses (Creswell, 2012). In conducting member checks, nine participants responded; however, zero participants corrected or made changes to any part of the transcriptions of their interviews. All nine participants confirmed that my interpretation of the interview accurately represented our conversation.

Interview protocol. *In general, I followed the Interview Protocols listed in each section below:*

Pre-interview.

1. I greeted each participant, introduced myself, and thanked them for participating in my research study.
2. I briefly mentioned and explained the goal of the study and discussed the timing of the study, along with an explanation of next steps.
3. I informed each participant of the research method/process and explained that we would begin with an initial 45-minutes interview and that I would follow up via email or video-conference, if needed.

4. I made sure each participant received a copy of the IRB consent form, which outlined their rights as participants in the study. I also assured participants that this study was approved by the Institutional Review Board at Indiana University and that I would follow strict guidelines in order to maintain their privacy.
5. I informed participants that the interview was being recorded so that I could later transcribe the interviews to properly code and analyze the data.
6. I explained to participants that I had created a set list of questions to guide the interview, but encouraged them to share additional information that might be relevant to the study. I also informed participants that they did not have to answer any questions that made them feel uncomfortable (especially related to sensitive legal issues).
7. As each school district agree to participate, I assigned them a pseudonym or code based on geographic area and participant number. For example, N1 means that the participant was from the northern region of Indiana and was the first participant selected from that area of the state. This labeling by geographic location was important to allow me to study the data and identify trends by area of the state.
8. After establishing these pseudonyms or codes, I created a master list of these codes and the names associates with them in a separate, password protected file. This file was kept separate from all other interview materials to keep their responses separate from their names.

Interview questions. *During the initial semi-structured interview, I began with the set of interview questions listed below:*

1. Please introduce yourself (name, job title, personal introduction) and describe your role at your current school district.

2. What experience do have prior to your role as technology director? Were you a teacher? Did you work in the field of technology outside of K-12 education?
3. Tell me about the technology initiatives that are currently in place in your district and what role, if any, you played in those initiatives.
4. Looking forward to the future of teaching and learning in your district, what would you like to see accomplished? How does this align with the overall mission/vision of your school district?
5. What kinds of policies do you have in place for managing student behavior with technology? Do you have an AUP (acceptable use policy), RUP (responsible use policy), or EUP (empowered use policy)?
6. Who developed your AUP, RUP, or EUP? Was there an attorney or other consultant involved?
7. What do you think when you read your technology usage policy? How does it make you feel?
8. From your perspective, what purpose do your district's usage policies serve? In other words, why have these policies?
9. How important are these policies? From your experience, do these policies make a difference in student and teacher behavior related to expected technology usage?
10. How are these policies enforced and what are the consequences?
11. Give an example of a time when your AUP, RUP, or EUP was challenged. How did you (or your district) respond to this challenge?
12. What, if anything, would you like to see changed in your district's policies around technology usage? Why?
13. In what other ways do you restrict/control/manage students' access to technology during the school day? Outside of the school day - at home for example?
14. Is orientation for students, teachers, or both required prior to getting access to the Internet?
15. What ethical and legal concerns, if any, do you have about technology usage policies? Are you aware of any school districts who have faced these issues?
16. Is there anything else that you would like to share with me about technology usage policies or initiatives in your district? Do you have any questions for me?

Interview.

1. I began each interview by recording the interview and by letting each participant know that they were being recorded.

2. Each initial interview was semi-structured and lasted approximately 45 minutes.

3. I conducted follow-up interviews via email or video conferencing (as needed) in order to respect the time of the participants.

4. I generally asked the same questions, in the same order to each participant. The use of a structured interview guide helped me make sure that the same types of questions were being asked of each person being interviewed. It was important for me to have this standardized set of questions to ask each participant so that the data could be more easily compared at the end of the data collection portion of this study (Weiss, 1995). Although most questions were asked in the same order with all participants, sometimes participants inadvertently skipped ahead and answered questions before they were even asked as they were responding to another question. As participants responded to these questions, I accepted their answers and view of the questions as is (Marshall & Rossman, 2011).
5. At the end of each interview, I debriefed with each participant and explained next steps for the study. I encouraged participants to contact me anytime with questions or concerns about the study.

Post-interview.

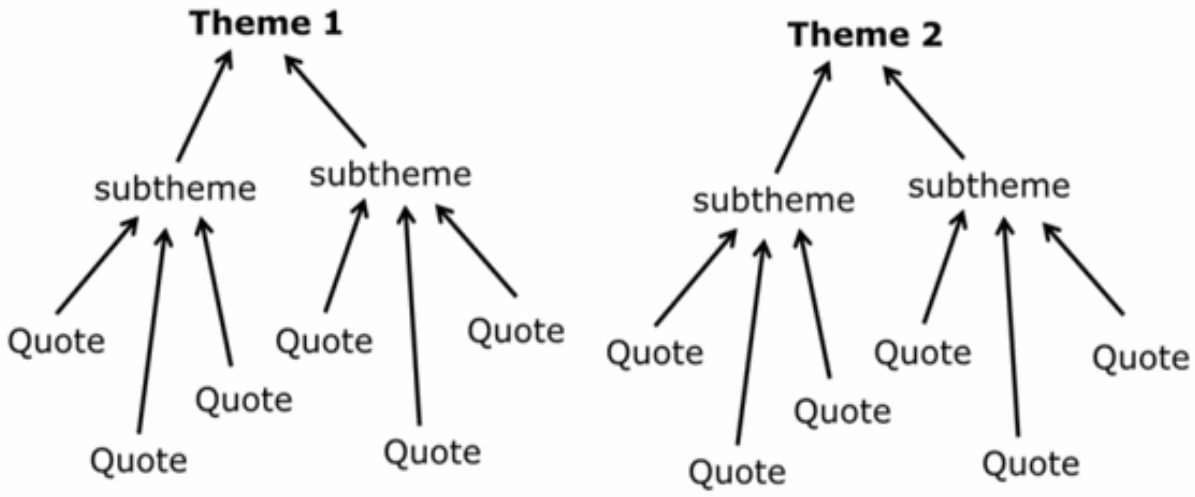
1. I used the pseudonyms or codes (described in the pre-interview section) of both the policies and interview materials to keep all of a participants' data organized and together in one location.
2. Once all interviews were conducted and recorded, I utilized a transcription services to help me transcribe these audio files.
3. After receiving the transcriptions from the transcription service, I reviewed them for accuracy by reading the transcriptions while listening to the original audio/video files to compare the two. I then made any corrections, as necessary and substituted participant names with their appropriate pseudonyms.

4. Once the transcriptions were verified, I used member checks to give each participant an opportunity to review the content and clarify the meaning of any parts of the interview that they think was inaccurately represented (Emerson, Fretz, & Shaw, 1995). Using member checks allowed me to make sure that the data that I collected and the interpretations of that data accurately represented the views of the participants in this study (Lincoln & Guba, 1985).
5. Once the interviews were conducted, recorded, and transcribed, I went through the process of coding, sorting, and integrating the data (Weiss, 1994). I used the same basic coding process as described in the section about coding analyses of technology usage policies.
6. As themes began to emerge from the coding of these interview transcripts, I then determined which themes to further examine and include in this study and which themes to set aside for future research (Emerson, Fretz, & Shaw, 1995).

Semi-structured interviews of technology directors: Data analysis. Using a similar process as used in the content analysis of technology usage policies, I analyzed the data collected during the in-depth interviews by utilizing emergent coding. After conducting each interview, I transcribed the recorded interviews and reviewed any notes taken during the interviews. I used coding (as described in the previous section) to identify key themes in the data by marking each phrase, statement, or observation and labeling it with a category (a word or a phrase). The key categories that were coded in the data were: (1) experience of the interviewee, (2) essential conditions to support technology usage policies, (3) constraints of technology usage policies, (4) legal issues and implications, (5) ethical/moral issues and implications, (6) acceptable use policy (AUP) characteristics and language/examples, (7) responsible use policy (RUP) characteristics

and language/examples, (8) empowered use policy (EUP) characteristics and language/examples, and (9) technology initiatives and their purpose(s). After coding the data, I used these labels to identify the major findings of the data and to select recurring themes for further analysis. In order to do this, I organized my findings using a classification tree, an example of which is in Figure 3.3 below.

Figure 3.3: Classification Tree for Semi-Structured Interviews (McMullin, 2018)



Confidentiality. All data collected during this study was kept until I have analyzed the data and published my findings/implications for further study. Because this research was being conducted as a component of my Ed.D degree program, I chose to retain the data for the duration of my program of study. All data was only accessible by me for the duration of the study (inside a password-protected folder on a private computer, only accessible to me). I kept all identifying information confidential. While transcribing the interviews, I assigned an alias to each participant. Beginning in the transcription phase, I no longer referred to the participants by their real names or locations. I kept a key (useful for reference for data) with these aliases in an entirely different password protected folder on my personal computer, to which no one else had access.

Once the data is no longer needed, I will destroy the data by deleting the files and wiping the hard drive on the device that I used for this study.

Limitations. In designing the current study, I considered the possibility of generalizability. By studying eleven different rural school districts from a variety of geographic areas within the state of Indiana and employing multiple qualitative research methods (interviews and content analyses), I took care to ensure that the data collected was representative of the larger K-12 educational climate in public, rural schools in Indiana.

One major weakness of qualitative research is the possibility of generalizability (Merriam, 2009). Because qualitative research is often focused on a limited number of participants, it can be tempting to apply the findings from the current study to other school districts not included in this study. Despite this apparent weakness in methodology, Merriam writes that "Erickson (1986) argues that since the general lies in the particular, what we learn in a particular case can be transferred to similar situations" (Merriam, 2009, p. 51). Therefore, I overcame the limitation of generalizability by using the data collected through interviews and content analyses to present the findings to the readers and suggest implications for further study instead of directly applying the findings from this study to all public, rural, K-12 school districts in Indiana. Because of the unique community context in which each school district is located, I did not attempt to generalize for all school districts, but rather to identify current trends in policy, ethical, and legal concerns surrounding technology usage policies in public, rural, K-12 schools with a 1:1 learning initiative in place. Finally, it is important to note that while important to consider how technology is being used for teaching and learning when studying 1:1 personalized technology initiatives in general, this is outside of the scope of this study; rather, this study is focused on the technology usage policies themselves and the technology directors' perspective of their policies.

Validity and reliability. As with any qualitative study, validity and reliability are major concerns. Many research experts claim that qualitative research is less "rigorous" than quantitative approaches to study and research because there is no set, prescribed procedure for conducting qualitative research (Merriam, 2009). However, "Shields (2007) argues that 'the strength of qualitative approaches is that they account for and include difference--ideologically, epistemologically, methodologically--and most importantly, humanly. They do not attempt to eliminate what cannot be discounted. They do not attempt to simplify what cannot be simplified''(Shields, as qtd. in Merriam, p. 12).

In the current study, I acknowledged my subjectivities and recognized that I was the sole collector of data via interviews. As such, much of the data that was collected was dependent on my ideas and experiences. By disclosing my subjectivities, I was able to overcome some of these concerns regarding reliability and validity. Furthermore, by conducting member checks and peer-debriefing, I tried to ensure that I did not misinterpret the data (Lincoln & Guba, 1985; Merriam, 2009). Maxwell (2005) describes member checks as "the single most important way of ruling out the possibility of misinterpreting the meaning of what participants say and do and the perspective they have on what is going on, as well as being an important way of identifying your own biases and misunderstanding of what you observed" (as qtd. in Merriam, 2009, p. 217). Additionally, the research design allowed me to incorporate themes and trends from a content analysis of the technology policies in supplementing the data collected during the interviews. Finally, I contend that the anomalies and unique perspectives offered through the inclusion of qualitative interviews in this research actually increased the applicability, validity, and reliability of the current study. Although the content analysis provided a less subjective approach to examin-

ing this issue, it also was unable to capture the attitudes, feelings, values, and beliefs of the individuals that were involved in shaping technology usage policies. Thus, I chose to design a qualitative methods study to incorporate the strengths of in-depth interviews with technology directors and content analyses of policies, while simultaneously accounting for the weaknesses of both qualitative approaches.

3.5: Timeline

After receiving university approval, I began this study by seeking out school districts that were willing to volunteer as participants for this study. Specifically, I selected participants according to the protocol described earlier in Section 3.3. This participant selection was conducted from June to September 2018. After participants were selected, I obtained a copy of all technology usage policies (AUP, RUP, and EUP) from each participating school district. A content analysis of each policy was conducted during September 2018. After reviewing these technology usage policies, I scheduled and conducted interviews with the technology directors from each of these eleven school districts. All interviews were completed by the end of October 2018. All transcriptions were completed by the end of December 2018. All data analysis was completed by the end of January 2019.

Chapter Four: Findings

4.1: Introduction

In this dissertation, the researcher focused on technology director's perspectives of technology usage policies in K-12, rural school districts with a 1:1 personalized technology initiative in place. There were three key questions guiding this study:

1. How did technology directors choose their type of technology usage policy and what was their purpose for selecting that type of policy?
2. What are some of the essential conditions to support technology usage policies in schools and what are some of the constraints of those policies?
3. What are the perceptions that technology directors have about the ethical and legal implications of their technology usage policies within the context of implementing a personalized 1:1 technology initiative in their districts?

This chapter provides the findings from eleven semi-structured interviews and content analyses of each participant's technology usage policies, as they relate to the three research questions of this study. Section 4.2 provides an overall description of the participants in the study in order to give more insight into the sample set selected for inclusion in this study. Following an explanation of the sample set, Section 4.3 presents the data collected from these participants via a semi-structured interview and content analyses of technology usage policies in each school district. In this section, the findings are organized by themes that emerged in response to each research question, based largely on the key findings presented in Chapter 2: Literature Review. Conclusions and recommendations for school leaders drawn from the data collected in this study will be further discussed in Chapter 5: Analysis and Recommendations.

4.2: Participants

For the purpose of this study, school districts were selected based on a variety of factors, with the main piece of selection criteria being their identification as a K-12, rural school district in Indiana with a 1:1, personalized technology initiative in place. As described in Chapter 3: Methodology, all participants included in this study had to meet five inclusionary criteria. Figure

4.1 below provides more information about each individual who participated in this study. For a more detailed explanation about how participants were selected, revisit Chapter 3: Methodology.

Figure 4.1: Information on Participants from Semi-Structured Interviews

Participant ID	Official Job Title	# of Years of Experience at this School, In This Job	Experience (Background)
N1	Director of Technology	1 Year, 2 Months	Systems Engineer; Network Administrator (Business)
N2	Technology Coach	2 Years	Classroom Teacher (Education)
N2	Director of Operations	1 Year, 4 Months	Maintenance Director (Business)
N3	Superintendent	6 Years	Classroom Teacher; Assistant Principal; Principal; Assistant Superintendent (Education)
N3	Director of Technology	1 Year, 3 Months	Computer Technician; System Administrator (Education)
N4	Technology Coordinator	3 Years	Computer Technician (Business and Education)
C1	Director of Technology	9 Years	Classroom Teacher; Technology Coordinator (Education)
C2	Director of Instructional Technology	6 Years	Classroom Teacher (Education)
C3	Director of Information Technology and Curriculum	25 Years	Information Technology Director; Classroom Teacher; Instructional Coach (Education)
S1	Director of Technology and Facilities	21 Years	Software Engineer; Technology Coordinator (Business and Education)
S2	Director of Technology	2 Years	Data Analyst; Director of Quality (Business)
S3	Technology Director	14 Years	Computer Technician (Education)
S4	Director of Technology	3 Years	Classroom Teacher (Business and Education)

4.3: Research Findings

Overview. Key findings indicated that acceptable use policies (AUPs) were the most common type of technology usage policies among participants in this study. While technology usage polices were present in all school districts in this study, technology directors believed their

effectiveness can be limited by a myriad of factors, primarily as a result of the presence or absence of the four essential conditions to support policies and the six main constraints of policies presented in Chapter Two: Literature Review. Furthermore, technology directors in this study expressed many more legal concerns or challenges than moral or ethical challenges. In the following paragraphs, data related to each of these key findings will be presented and further explained.

Research question #1. The study's first research question was focused on learning about the type of technology usage policy that each participant's school district had in place. It also was designed to understand the purpose for selecting that type of technology usage policy (AUP, RUP, EUP). In addressing this question, the researcher primarily relied on the data from the semi-structured interviews with technology directors. It should be noted, however, that the researcher also used the content analyses of each participant's technology usage policies in order to help explain and strengthen the findings from the aforementioned interviews with technology directors. Both pieces of data collection and evidence were essential in order to address this first research question.

Types of technology usage policies. Through a content analysis of the technology usage policies for each of the eleven participants in this study, the researcher found that eight had Acceptable Use Policies, three had Responsible Use Policies, and zero had Empowered Use Policies in place in their districts. The researcher also found that the majority of participants from the North (three out of four) and South (four out of four) geographic regions of Indiana had policies that were Acceptable Use Polices, while the majority of participants from the Central (two out of three) geographic region of Indiana had policies that were Responsible Use Policies. When asked, "What kinds of policies do you have in place for managing student behavior with

technology?" and "Do you have an AUP (acceptable use policy), RUP (responsible use policy), or EUP (empowered use policy)?", ten out of eleven participants identified their technology policies using the exact wording that was present in their technology usage policies. However, one technology director described his school's policy differently than how it was identified in the written policy. Participant N4 embraced an EUP-like mindset and vocabulary throughout his interview; however, his school district's policy was written using language that was closer to an AUP for the majority of the policy. For example, Participant N4 said, "We really do try to empower our students and if they want to do something, we find a way to accommodate that…and I think our policies reflect that." In contrast, one key line from N4's technology usage policy read, "Access to these services is given to act in a considerate and responsible manner. Students must comply with corporation standards and honor this agreement to be permitted to use technology." More specifically, N4 said that although the policy was technically called an AUP, he felt like the language within the policy itself, combined with other ways that the district practically implements the policy, would actually qualify the policy as more of an EUP.

Perhaps the most interesting finding from this interview question was the fact that nine of the eleven participants requested that the researcher define each of the terms (AUP, RUP, and EUP) and describe the difference between each before responding to the question. After the researcher provided the standard definitions of each term (outlined in Chapter 1), ten of the eleven participants shared that they had never heard of the idea of an Empowered Use Policy and three of these participants indicated that they were interested in learning more about EUPs. In fact, two participants emailed the researcher following the interview to ask for a copy of an example EUP so that they could explore implementing a similar policy in their districts.

Choosing a technology usage policy. During the interviews, the researcher asked participants two questions to better understand how they chose and/or developed their technology usage policies. The first questions was: "Who developed your AUP, RUP, or EUP?" In responding to the first question, five participants said that a committee of representatives had worked together to develop their technology usage policy. Two participants said that they paid a consultant or company that specializes in policies for schools to develop a policy for their district. Two participants shared that the technology director alone wrote the technology usage policy, without consulting with anyone else to create the policy. Similarly, one participant said that the superintendent created the policy alone. Finally, one participant said that a group of administrators worked together to create the technology usage policy. Interesting, two of the eleven participants in the study mentioned that they used language and excerpts from other school districts' policies in creating their own technology usage policy.

The second question that the researcher asked related to how participants chose/created their technology usage policies was: "Was there an attorney or other consultant involved?" In responding to the second question, six participants shared that a lawyer was consulted (five district did so after the policy was already created and one district involved legal counsel in creating the policy). One participant was completely unsure as to whether or not a lawyer had ever been consulted regarding their technology usage policies. Four participants explained the importance of having their School Board review and formally approve the technology usage policy before implementing it.

A more detailed explanation of the methodology employed by each of the participants' school districts in choosing technology usage policies is described in the table below:

Figure 4.2: Selection of Technology Usage Policies

Participant ID	How did participants select their technology usage policies?
N1	This district's technology usage policy was developed in a collaborative effort between the superintendent, former technology director, and a group of lawyers.
N2	This district purchased their technology usage policy from a company that specialized in writing legal policies for schools. This district trusts that this company is following proper legal guidelines in developing the policy for their district.
N3	The previous technology director in this district wrote the initial policy. The current technology director revised the policy without any input from anyone else in the district. This participant said that an attorney was consulted with the original policy, but that revisions were too "nitty gritty" for an attorney to review.
N4	A committee of teachers and administrators worked with the technology department to develop their technology usage policy. This policy is regularly reviewed and updated over time by this committee. An attorney was consulted after the policy was created.
C1	Administrators in the district created the technology usage policy. The technology director was not involved in the creation of the policy, but is expected to enforce the policy. The School Board approved the policy. Once it was approved by the School Board, an attorney reviewed the policy.
C2	A technology committee put together the technology usage policy in this district. This committee pulled language from other school districts' technology usage policies in order to create their own policy. After the policy was developed, the committee met with the School Board. A team of attorneys was consulted to make sure that it would hold up in court, if challenged.
C3	This district created their technology usage policy with a committee of representatives from the district (teachers, technology leaders, technology director). After the committee created the policy, they shared the policy draft with the administrators in the district for feedback. Then, the policy went to the School Board for approval. This participant was unsure whether or not an attorney had reviewed the technology usage policy.
S1	The original technology usage policy was adapted from another school district's policy. A committee of representatives (mostly teachers) from across the school district adapted the technology usage policy. The school board formally approved the policy, so their school attorney viewed it. From this participant's perspective, an attorney's review of the revised policy was not necessary because the original policy had been approved by the original school district's attorney.
S2	The Technology Director wrote the policy alone. An attorney was not consulted.

S3	The original technology usage policy for this district was developed by the superintendent. It was later revised when the district went 1:1. After the revision of the policy, the district consulted an attorney.
S4	This district received an example copy of a technology usage policy from a paid consultant. Then, the district modified the policy to meet their specific needs. An attorney was not consulted.

Purpose of technology usage policies. When asked about the purpose for their technology usage policies, all eleven participants in this study indicated that they believed that their policies were in place mainly as a legal precaution to protect their school district and/or as a requirement of complying with CIPA. In fact, participant N1 went so far as to state that "There is not much purpose for the kids. It is just to keep our school out of trouble. I think the big thing is that it is just a cover your butt kind of thing." However, a content analysis of participants' technology usage policies revealed a variety of additional reasons for implementing these technology usage policies in the districts examined in this study. Ten out of the eleven policies explicitly identified the purpose of the policy, while one policy never mentioned its purpose at all. Two policies identified their purpose as being to educate and teach users how to use technology responsibly and legally. N4's policy provided an example of this kind of purpose in its opening paragraph: "These guidelines are provided to make all users aware of the responsibilities associated with efficient, ethical, and lawful use of technology resources." One policy identified its purpose as being to keep kids safe while using technology. Two other policies listed their purpose as being to provide rules for users for how to use technology exclusively for educational purposes. Both S4 and N1's policies had the same phrase in them that described this kind of purpose: "The purpose of the document is to inform parents, guardians, and students of the rules governing the use of district and personal technology resources while on or near school property,

in school vehicles, and at school-sponsored activities, as well as the use of district technology resources via off-campus remote access." Finally, two other policies described their purpose as being to support their school district as they provided educational opportunities and resources to users. C3's policy described its purpose this way: "The purpose for the Respectable Use Policy is to foster and support creativity and innovation in the pedagogical shift from a traditional teaching model to guiding, facilitating, and exploration – infusing technology to meet the needs of learners with ranging abilities, backgrounds, and populations in our school."

Research question #2. The study's second research question was focused on identifying and understanding more about technology directors' perspectives on essential conditions to support technology usage policies, as well as the main constraints of these policies. In order to address this second research question, the researcher primarily relied on the data from the semi-structured interviews with technology directors. The researcher also referred to the content analyses of each participant's technology usage policy to identify supporting phrases and statements that supported the attitudes and opinions expressed by the participants in their interviews. Both pieces of data collection and evidence were essential in order to address this second research question.

While conducting interviews with each of the eleven participants, the researcher asked participants to describe the purpose of their technology usage policies and to describe any challenges that they have experienced with these policies. In doing so, the researcher discovered that each of the six most commonly cited constraints of policies (identified in Chapter 2) were mentioned at some point by at least one of the participants during their interviews. A description of the findings related to both the purpose of technology usage policies and each of the commonly

identified constraints of policies are outlined in the sections below. It is important to note that there was no distinction between participants' responses in terms of their geographic location within Indiana.

Essential conditions to support policies. While conducting interviews with each of the eleven participants, the researcher discovered that the four essential conditions to support policies (identified in Chapter 2) were mentioned at some point by several of the participants. A description of the findings related to each of these essential conditions to support policies are outlined in the sections below. It is important to note that there was no distinction between participants' responses in terms of their geographic location within Indiana.

Essential condition #1: alignment of vision. Eight of the eleven participants discussed how their technology usage policies were aligned to their district's vision. Four of those participants explicitly stated that they believed that it was critical for their technology usage policies to be aligned to their district's vision for teaching and learning. S1's response to the interview question "Looking forward to the future of teaching and learning in your district, what would you like to see accomplished? How does this align with the overall mission/vision of your school district?" illustrates this data point. S1 responded by saying, "Our technology usage policy is tied to our overall mission to produce well-rounded students by sending them out into the workforce with whatever tools they need to function. Our technology usage policy helps us do that." Furthermore, those four participants also attributed much of the effectiveness of implementing and enforcing their policies to their overall alignment with the vision and purpose of the district. To further support this idea, the researcher found (via content analyses of policies) that ten of the eleven technology usage policies contained a statement of alignment to the district's vision when explaining the purpose of their policy. For example, N3's technology usage policy

included this statement: "[N3's School District] believes that students need access to technology, but they should act in a responsible, efficient, courteous, and legal manner that supports the district's mission, goals, and student initiatives. The mission…is to use technology effectively to increase student engagement, thereby increasing student achievement in all areas."

Essential condition #2: positive school culture. Six of eleven participants indicated that developing and maintaining a positive school culture was essential to implementing and enforcing technology usage policies in their district. Participant S2 explicitly stated this idea in this way: "We are working on building and keeping positive school culture by encouraging our students to share and collaborate with each other. Our technology usage policies definitely play a role in that culture." Likewise, Participant N2 described the school culture that they were working to create as being a "safe, respectful, and school-appropriate environment." The remaining five participants did not disagree that a positive school culture was important, however, they simply did not mention the role of school culture at any point during their interview with the researcher. Through a content analysis of each participant's technology usage policy, the researcher found that although zero of the policies explicitly mentioned school culture in their policies, all of the policies used language that might help describe the school culture in each district studied. Interestingly, the researcher noted that the language and tone of the policies themselves were often contradictory to the kind of school culture that the participants themselves described. For example, in his interview, participant C1 shared that the staff are close relationally and that an extremely positive, respectful, trusting, supportive dynamic exists between the staff and the technology department, of which he was extremely proud. However, when reading through C1's technology usage policy, the researcher noted five separate occasions where the language was either extremely harsh or unnecessarily restrictive when referring to staff members and their use

of technology. One such example from C1's policy read: "Employees may be permitted to use the [C1's School District] resources for occasional, non-work purposes with permission from [C1's School District]." The policy went on to include an agreement that staff were required to sign that allowed the school district to automatically deduct repairs and damages from their paychecks in the event of a lost, stolen, or damaged device. Throughout this study, the researcher did not observe this kind of provision in any of the other ten participant's technology usage policies. Furthermore, from the researcher's professional experience in the field, she was not aware of any other school district who employed a similar strategy.

Essential condition #3: availability of teacher training. Eight of the eleven participants expressed a belief that teacher training is critical for implementing their technology usage policies. All eight of these participants spoke positively of teachers and described their role as a technology director as being someone who supports teachers. These eight participants described current and ongoing initiatives to provide support and training for teachers in their district, with the focus being on making sure that teachers felt comfortable both teaching with technology and implementing the technology usage policies in their classrooms. For example, Participant N1 said, "We are committed to investing in our teachers. They need more PD time. They have to be supported or this initiative will not work like we want it to." Of the remaining three participants, two did not mention the need and/or availability for teacher training in their district at all and one spoke negatively about teachers, citing frustration with teachers who lack strong classroom management. While conducting content analyses of technology usage policies, the researcher found that two policies specifically mentioned teacher training. One of the policies even provided a detailed overview of the training that was available to teachers and students on an annual basis.

Examples of topics that were included in this policy were: device 101, teaching with your device, digital citizenship, and how to handle lost/stolen/broken devices.

Essential condition #4: digital citizenship and leadership training for students. Seven of the eleven participants discussed the importance of investing in digital citizenship and leadership training for students during their interviews. When asked about technology initiatives in her district, Participant N2 shared that digital citizenship was one of her district's main, ongoing initiatives. Specifically, N2 said

> One of our big ones is the digital citizenship. That's really what we have been focusing on here on the educational side. We are lucky enough that we actually have technology teachers on the elementary side, so we have been doing that for years….So we have been Commonsense Media Certified the last two years and kind of have been working with our librarians to create the kind of curriculum that they could take into the classrooms on the secondary as well. So, we have been heading that up as our biggest push beyond just our general 1:1.

Of the four participants who did not discuss such training for students, Participant S1 did indicate that he believed that setting expectations for students was important, even if it was not the result of formal training/classes for students. More specifically, Participant S1 shared that

> You have to give students the expectation of what you want whenever they are surfing the web or using the tools the school is supplying and to become 21st Century Internet citizens. When expectations are set, ninety-nine percent of our students follow them.

Content analyses of technology usage policies revealed that two of the participants' policies specifically mentioned digital citizenship training and/or classes for students. As mentioned in the previous section about teacher training, one of the policies specifically detailed student training

that would be provided by teachers and other staff members on topics that aligned to those same training sessions provided to teachers (as described in the section above).

Constraints of policies.

Constraint #1: Most technology usage policies are developed by a committee of representatives from the school district, with very little research or legal authority. When asked, "Who developed your AUP, RUP, or EUP? Was there an attorney or other consultant involved?", five of the eleven participants stated that their school district's technology usage policies were developed by a committee; the remaining six participants said that they either wrote the policy themselves or consulted with an outside company who created their policies for them. Six of the participants responded that they consulted an attorney for legal counsel, advice, or approval before adopting and implementing their technology usage policy. Participant C1 described this constraint by sharing his rationale for creating an as-needed kind of policy instead of implementing a rigid, fully developed technology usage policy: "There's two ways to look at that. It is bad because we do not have a final thing that we can say legally this is going to stand up in court, but it is also very flexible. You don't need an 18-member committee to decide on a chance, so it's good and bad."

Constraint #2: Technology is constantly changing. All eleven participants mentioned that they felt that one of the major struggles that they face with creating, implementing, and revising their technology usage policies is related to the fact that technology is ever-changing. All eleven participants expressed how challenging it was for them to design a technology usage policy that was both up-to-date and adequately comprehensive without having to constantly revise it to include the newest terms, technologies, and issues that must be addressed. Participant N2 stated that "trying to foresee things that are out there in the future and prepare for them" is nearly

impossible. Participant C1 shared that his policy was intentionally written in a vague manner so that it does "not get outdated with changing social media outlets", for example. Participant S3 shared that "it is hard to keep it up-to-date…the policies have to constantly change because of the ever-changing nature of technology."

Constraint #3: Policy alone is not enough to change behavior of students and staff. When asked, "How important are these policies? From your experience, do these policies make a difference in student and teacher behavior related to expected technology usage?", eight participants responded that they did believe that their policies made a difference in student and staff behavior. However, two of these eight participants felt as though their policies made a bigger difference in student behavior when supported by explicit teaching of expectations to students and enforcement of the policies. In other words, these two participants did not feel as if their policy was having as big of an impact on student and staff behavior without having other programs and supports in place within classrooms. One of these participants, C2, explained this concern by saying, "We can talk about it in the policy, and like you said, they're going to read every word of it…yeah, right…like they don't have anything better to do. Because of this, we work to teach the things in our policy in different ways, like digital citizenship, for example." Three participants said that they did not believe that the technology usage policies themselves were having any real impact on student and staff behavior; rather, they shared that they felt as though the technology usage policies were not even being read by the vast majority of students, teachers, and parents, for whom these technology usage policies were created. For example, Participant S4 responded to the interview question mentioned above by stating, "Students? No. I don't think they actually even read it. I think they just sign off on it so they can get access to the

Internet and a device." Similarly, Participant N2 responded with this statement: "I don't think it helps guide the behavior in any way."

Constraint #4: Schools often communicate about technology usage with a negative tone and resort to blocking to address behavioral issues. During the interviews, seven of the eleven participants spoke about students and technology-related behaviors with a negative connotation. All seven of these participants repeatedly described that their job was to block anything that could be a distraction and disruption to students. For example, Participant N3 said of students, "they just make terrible choices…so we have to lock down what they can get to so they can't make those choices…there are just some kids who we have found just couldn't control themselves." Participant S2 expressed this same sentiment in a slightly different way when he said, "They know what they can get away with and some of these kids will always push the limits, no matter what it is. They find ways to get around whatever filters we have in place and then they share those ways with their friends." In contrast, four of the participants spoke positively about students using technology, citing the need to equip students with the skills they need to be successful after high school. All four of these participants mentioned the vital role of setting, teaching, and re-teaching expectations for students in order to change student behavior.

Constraint #5: Ensuring student safety online is overwhelming and/or difficult. Eight of the eleven participants spoke at length about the challenge of keeping students safe online. Citing concerns over legal responsibility, all eight of these participants included a short paragraph in their technology usage policies as a legal disclosure to protect themselves. The most common phrases within these disclaimers were: (1) "[School District] makes no warranties of any kind, either expressed or implied for the provided access", (2) "The staff and school are not responsible for any damages incurred, including, but not limited to…", and (3) "The corporation is not

responsible for the accuracy, nature, or quality of information stored on school resources or gathered through corporation-provided access." The remaining three participants simply did not mention any concerns related to the challenge of keeping students safe online during their interviews with the researcher and a content analysis of each of these three participants' technology usage policies revealed there was no language in their policies to indicate a concern related to ensuring student safety while online.

Constraint #6: Technology usage policies are difficult to write in such a way that mediates competing values from different stakeholders. Nine of the eleven participants in this study spoke at length about how difficult it was for them to write their technology usage policies. These nine participants described the challenge of balancing the responsibility to prepare students to use current technology for learning and simultaneously keeping them safe from potential harm while crafting their technology usage policies. Participant C2 described this challenge this way: "You have both sides…you want to protect your school corporation, but you also want to protect your staff and students. But at the same time, it's mostly just wanting to educate them to be responsible with technology, not necessarily limiting them." Three of these nine participants cited lack of resources, time, and knowledge as reasons for why they found it difficult to write their own technology usage policies. Participant S1 described these challenges this way:

> Resources are always an issue in the IT Department…you hate to say that you have to borrow or steal from other districts (to develop a policy), but it all comes down to staffing and you do what you need to do to keep moving forward. I wish there was more guidance from the State about what we should put in these polices. That would help small schools like us a lot.

As such, two of these three participants shared that they contracted with an outside company or consultant in order to draft their technology usage policies. The remaining two participants simply did not mention this constraint during the course of their interview.

Research question #3. The study's third research question was focused on identifying and understanding more about the perceptions that technology directors had about the ethical and legal implications of their technology usage policies within the context of implementing a personalized 1:1 technology initiative in their district. In order to address this third research question, the researcher primarily relied on the data from the semi-structured interviews with technology directors. The researcher also referred to the content analyses of each participant's technology usage policy to identify supporting phrases and statements that supported the concerns expressed by the participants in their interviews. Both pieces of data collection and evidence were essential in order to address this third research question. As a result, the researcher identified three ethical/moral challenges and eleven legal challenges that were most commonly mentioned by technology directors in this study. Each of these challenges is identified and described in the paragraphs below.

Ethical and moral challenges.

Ethical/Moral Challenge #1: Who should be responsible for protecting students from inappropriate content?. All eleven participants explicitly talked about this ethical/moral challenge in their interview. Eight of these participants emphasized the important role that parents play in protecting their students from inappropriate content while online. Of these eight participants, one participant indicated that the responsibility for this was solely the responsibility of the parent. This sentiment is represented in this excerpt from Participant N2's technology usage policy:

> Outside of school, parents bear responsibility for the same guidance of Internet use as they exercise with information sources such as television, telephones, radio, movies, and other possibly offensive media. Parents are responsible for monitoring their students' uses of the school district systems and of the Internet if the students are accessing the school district systems from home or a remote location.

The remaining seven participants suggested that protecting students from inappropriate content was a joint or shared responsibility between the parents and the school, with only one participant mentioning the importance of setting expectations for students. Participant S2 explained that "if we can have the parents know what the kids are doing and watching for at home, and the teachers are watching for it here in class, then the kids are going to be watched and know that they are being watched and protected." Three of the participants in the overall study said that they (or their school district) assumed all of the responsibility associated with protecting students from accessing inappropriate content online, citing filters, firewalls, and digital citizenship instruction.

Ethical/Moral Challenge #2: Who should be responsible for teaching students proper use of technology?. Seven of the eleven participants explicitly stated that they felt that teaching students proper use of technology is an on-going, joint effort between parents and the school. For example, N4's policy communicates this idea in this way: "It is the joint responsibility of school personnel and the parent or guardian of each student to educate the student about his/her responsibilities and to establish expectations when using technology." On a slightly different note, Participant N1 described how this joint responsibility can be frustrating when parents don't really want to accept partial responsibility. N1 said, "Parents just want us to fix whatever issues they are having and we're like, 'WOW, you're the parent, but we'll put some more restrictions on if that's what you need.'" Three participants indicated that this was the sole responsibility of the

school district, reasoning that the school should teach these skills because they are providing students with access to technology for teaching and learning. In C1's technology usage policy, it is outlined this way: "School personnel will also provide education about appropriate online behavior, including interacting with individuals on social networking sites and cyber-bullying awareness and response." Participant N2's policy also contained similar language: "The district expects that faculty will blend thoughtful use of the school district's and personal technology resources and the Internet throughout the curriculum and will provide guidance and instruction to students on their safe and appropriate use." The remaining one participant felt that parents should be teaching proper use of technology, arguing that students already have had access to technology before entering the school district. During his interview, Participant C1 stated "my stance is that if they are going home, then mom or dad should be doing that…that's their job. I mean, you've got some great parents here who keep their kids straight, but you have a lot who do not." This participant also mentioned that if parents took responsibility for teaching proper use of technology and enforced these expectations at home, students would be better prepared to use technology at school for teaching and learning.

Ethical/Moral Challenge #3: Do all students have equal opportunity to learn and access technology resources?. Only five of the eleven participants were concerned about students having equal opportunity to learn and access technology resources. Of these five participants, only Participant S2 mentioned the Americans with Disabilities Act (ADA), raising a concern over accessibility to technology by stating, "The biggest thing that I have heard is making sure you are compliant, ADA compliant. That's a big thing." Participant C1 shared that it was important to make sure that special education students were properly served/supported with access to technology. According to Participant C1,

> The legal part of that is that if you expel a child that has an IEP, you still have to provide services for them during that time, so you really can't take away that technology in a sense…because all of our classrooms use Google Classroom. So everything is digital, so you really can't use technology anymore as a way to prevent them from accessing those services for those individuals.

Participant C3 mentioned that the technology department was focused on making sure that students of all ability levels and needs were supported with technology by placing "the focus on personalized learning and different instructional strategies to better utilize the tools for instructional needs." Participant N4 shared that his district included an explicit phrase in their handbook about equal access, but this was not included in the technology usage policy itself. Participant C2 explained that all students need access to the same quality of devices and support, regardless of their socioeconomic status or ability to pay for access. She said,

> Our school is in an area where we have a fairly low income. What you see is the parents don't come in and register, and we have trouble getting the applications filled out. So many students cannot provide their own device, so we have classroom sets of Chromebooks for those kids because they have to have access to this technology to learn as well, even if they cannot afford it.

The remaining six participants in this study did not express any concern over equal access to technology or online learning opportunities. Overall, three of the participants in this study shared that their first response to student misbehavior was to take away a student's device. Interestingly, all three of these participants who take away student devices have a line similar to this one from Participant N4: "Access is a privilege, not a right; as such, general rules of school behavior apply." Another policy went further to explain that "school administrators may revoke

the use of the iPad due to my poor performance in academics, attendance, and/or behavior" (Participant N3). Conversely, two participants in this study shared that they never take away a student's device, citing concerns over equal access; instead, these schools have developed educational programs and materials to re-teach expectations to students and/or have ways to further restrict a students' usage of their device (less freedom without loss of educational opportunity). Participant N3 shared that "If you keep playing a game in class and the teacher keeps telling you no, then we don't take away the iPad, we take away the game. We have decided to explore other options rather than taking away access." The remaining six participants shared that they do not have a set policy for whether or not to take away a student's device; rather, they choose to handle these discipline issues on a case-by-case basis.

Legal challenges. Throughout the interviews, participants identified eleven main issues related to legal requirements and challenges of using technology in schools that they felt were addressed in some way by their technology usage policies. The most frequently mentioned legal concerns were related to students and their potential to access inappropriately material. More specifically, all eleven participants expressed concerns with filtering, obscene material, and off-campus behavior with technology. Additionally, all eleven participants discussed that bullying was a legal concern that they could foresee as being a challenge. Interestingly, however, the participants in this study shared zero actual examples of bullying using technology or violations of their technology usage policies related to cyberbullying.

Another common legal concern was related to privacy rights of students. Participant S1 spoke at length, describing why privacy rights of students should be a major concern for school districts. He said,

> The concerns that I have heard from other districts are obviously the privacy issues and making sure your students' data isn't getting into the hands of anyone that should not have it. There are so many different rules and resources that the kids are using and you are really at the mercy of the security of the companies that you are using. The fact that banks and government agencies are getting hacked everyday…you worry if one of these companies you do business with gets hacked… does that put you in jeopardy? So yeah, that is obviously a concern. I don't know what our policy would be to protect that because once it is out there, you can't pull it back.

In fact, ten out of the eleven participants shared with the researcher that they were concerned with keeping students' data private and also with communicating to students that their information and actions were not private on a school-owned device (both on-campus and off-campus). Participant N3 echoed the concerns expressed by S1, but clarified by saying, "I mean, yeah, we have concerns about it, data breaches, and that kind of thing, but we haven't had any actual problems so far."

Finally, ten of the eleven participants also expressed a concern over how to deal with criminal actions of students (intentional or unintentional) while using technology. By far, the most commonly mentioned criminal act throughout the interviews was related to inappropriate content created and shared by students. When asked about this, Participant N1 responded by saying, "the big one we run into is just inappropriate pictures of minors…really, that's what we run into on our end and that's kind of scary to deal with." Similarly, Participant N2 said that her district struggled more with students who look at "inappropriate content and send inappropriate emails, so we just shut down email or social media for a certain amount of time and then reopen and give students a chance to prove themselves." With regards to how to address these issues

with students, Participant N4 shared that "enforcement of policies is typically done by the Dean of Students and if students are caught doing something inappropriate, he will handle it with an out of school suspension, loss of device, or something else…it's kind of a sliding scale, depending on what a student would do." Another participant,

Other legal issues that were less commonly mentioned by participants were focused around common topics in the existing body of literature and case law. For example, only six of the eleven participants mentioned students' right to freedom of speech, with only one distinguishing between speech and cyberspeech. Two participants discussed how student work as a reflection of the school district and explained how the school district should have editorial rights over work created at school. Four participants referred to elements of special education law that are present in IDEA or ADA. Although technology usage policies are a requirement of CIPA, only five participants in the study even referenced it at all. For example, Participant N3 stated that he "thought that we were supposed to have a technology policy for CIPA", whereas Participant N2 shared that "the company that wrote our policy makes sure that we follow all the state and government guidelines, like CIPA, with our policies." As discussed in the previous section regarding moral and ethical issues of technology usage policies, equal access was mentioned as a concern by five of the participants in the study.

Figure 4.3 below outlines these eleven main legal issues and indicates how many technology directors expressed a concern with each of these issues, along with excerpts from their technology usage policies and quotes from the interviews to further illustrate their concerns:

Figure 4.3: Legal Issues Mentioned By Participants

Legal Issue/Challenge	# of Technology Directors who	Supporting Example from Technology Usage Policies (Participant)	Supporting Example from Interviews (Participant)

	expressed concern		
CIPA	5	"The technology protection measures may not be disabled at any time that students may be using Corporation Technology Resources if such disabling will cease to protect against access to materials that are prohibited under the Children's Internet Protection Act (CIPA)." (S3) "[SCHOOL DISTRICT] is in compliance with the Children's Internet Protection Act (CIPA) and has installed technology protection measures for all computers in the school corporation in order to aid in restricting access to materials that are harmful for minors." (C1)	"We are actually now making our policy more legalistic to comply with CIPA." (S3)
Obscene Material	11	"Families should be warned that some material accessible via the Internet might contain items that are illegal, defamatory, inaccurate, profane, sexually oriented, or potentially offensive to some people" (N1)	"We have a legal obligation to keep kids safe from viewing inappropriate material." (N1)
Privacy Rights of Students	10	"Activities that are NOT permitted nor encouraged include: online sharing of any student's or staff member's name, home address, phone number, or other personal information" (N1) "Users should expect only limited privacy in the contents of personal data or files on the school district equipment or systems." (N2)	"I think a lot of districts are now facing the privacy laws coming across from Europe and I think a lot of districts are just missing the mark. Like, we gather all these pieces of information about you, but we don't tell you why, you just assume it's for our records. I mean, I can see it being a big issue in a year or two." (N4)

		"School district personnel have the right to access information stored in any user directory, on the current user screen, or in electronic mail. They may review files and communications to maintain system integrity and ensure that individuals are using the system in accordance with District policies and guidelines. Students should not expect files stored on District servers or through District provided or sponsored technology services to be private. By accepting these terms and conditions, students waive any right to privacy or confidentiality to material that was created, sent, accessed, or stored using a District computer or a District-provided network account." (S1)	"A policy isn't really the solution for this. Once your data is out there, you really can't get it back." (S1)
Equal Access	5	"Internet uses at [SCHOOL DISTRICT] will be offered to all students." (C1)	"You can't really take it away. It's like a textbook. If a kid gets in trouble for passing notes, you're not going to take his textbook away. You know, so you have to provide them with a nice, new, fast laptop, but then once they get in trouble, we can change it our with one that works really slow….but you can't take away access." (C1) "One of the things one of the teachers wants to do is if a kid doesn't have everything in place, then she doesn't

			want them to have the internet. Having the internet for Gmail, Google Classroom, and other things, they have to have it for class. It's a give and take kind of thing" (S2)
IDEA/ADA/IDEA (Special Education Laws)	4	No examples were found in participants' policies. This concern was only expressed during the interviews with the technology directors.	"Our big concern is making sure that our technology, especially our website is ADA compliant" (S2)
Criminal Acts (most commonly sexting)	10	"Activities that are NOT permitted include: any activity that violates a school rule or a local, state, or federal law." (S4)	"I don't know of any cases where kids here have taken our devices to take inappropriate pictures, but I am sure it happens. The unfortunate part for kids is that they start talking and send them to their friends. That will end up in a criminal case, but we try to head it off before it gets there." (N2)
Student Free Speech / Cyberspeech	6	"Unacceptable Uses: The laptop must not be used as follows: (1) for personal gain or the advancement of individual views; (2) to express personal opinions on the intranet or internet." (C1)	"My concerns have to do with responsible use, cyber bullying…those kinds of things. The misuse of technology is what I am concerned about there. I don't know that we have had any legal issues with this, however." (N3)
Off-Campus Behavior	11	"Misuse of personal or district technology resources while on or near school property, in school vehicles, and at school-sponsored activities, as well as the use of district technology resources via off-campus remote access may result in disciplinary action	"Our content is filtered and our devices are monitored both at home and at school." (C3) "In this day and age, a lot of the problems I think happen on student-owned device, at

		up to and including expulsion." (N4)	home – which we don't have control over. If students are going to do inappropriate things, they are going to do it on their own devices." (S1)
Bullying	11	"I will not: use any form of electronic communication to harass, intimidate, ridicule, or otherwise harm others." (N3)	"You do worry about stuff like that. How far is it us, versus, since it is our device, how far does our responsibility go?" (S4)
Student Work (as a reflection on the district)	2	"The school corporation has final editorial authority over online content (which includes but it not limited to websites, wiki's, and blogs)." (C2)	"Our students must request permission to research some topics because their work represents us as a district." (N4)
Filtering	11	"Any District computer used by students shall have Internet filtering software in place either on the computer itself, or on the server through which the computer accesses the Internet." (N4)	"We use Lightspeed and Google Authentication to filter and protect our students." (C2)
<u>Other Miscellaneous Legal Concerns</u>:			
Copyright, plagiarism, insurance/breakage (who is liable for damages), COPPA, data privacy, annual signing of policy, taking away student access to devices (especially students who are Free and Reduced Lunch eligible).			

Overall, Participants were very concerned with addressing these legal issues, but they all felt confident that their technology usage policies would protect them. Participant N1 candidly shared that he doesn't "want to be in the news", so he was willing to do whatever his district needed done to stay out of legal trouble and/or receive negative attention from the media. Furthermore, Participant C1 actually explains his district's technology usage policy to students by simply saying: "Whatever you do with this device, do not embarrass yourself or the school on

the six o'clock news." Aside from the risk of getting negative media attention, all eleven participants in this study felt as though their technology usage policies would withstand legal challenges. Participant N3 explained that "having a policy would be something we would need if we had a big issue because if we didn't have it in writing, then someone is going to say, 'well…they can't do anything." Participant C2 went even further by saying that "we have to lay it all out there otherwise the parent is going to come back and say it wasn't in the policy. So, we have to make sure that the corporation is protected by showing explicitly what we mean by listing what our policy is and includes."

Challenges to technology usage policies. Despite expressing concerns about the potential ethical, moral, and legal issues mentioned in the sections above, the technology directors in this study did not share many stories or examples of actual times when their technology usage policies were challenged by parents or students. When asked, "What ethical and legal concerns, if any, do you have about technology usage policies? Are you aware of any school districts who have faced these issues?", only one participant, C3, was able to identify an ethical/moral challenge. Participant C3 described a scenario in which "a student got access to something that the parent thought was inappropriate and voiced a concern about why our filtering did not catch that." She went on to describe that while the school district assumed responsibility for protecting students from inappropriate content, filtering and safeguards that are in place are not effective 100% of the time and that the school was making its best effort to protect students.

Only three participants were able to identify a specific legal challenge to their policy. One additional participant (S3) declined to respond to this question, saying that "that one is a touchy subject. A couple have things that have happened, so I need to abstain from answering

you." Participant C3 was also the only participant to mention a legal challenge related to the ethical/moral challenge to the technology usage policy as well. In this scenario, a parent was asking whether or not the school was being compliant with COPPA. Participant C3 then explained that she initially did not know the answer and this parent's inquiry led her to research more about COPPA and ensure compliance in her district. Participant N1 expressed a problem with having retrain staff members after an incident in his school district involving pornographic images of a minor being distributed at school. Participant N1 explained:

> We go through the devices and if we see anything at all, we have the SRO (school resource officer), so we report it to her. But now we are responsible for reporting it. You can't just give it to the principal to report, it's our responsibility. So we have kind of retrained our staff in that way. That is the big ugly one we have dealt with a few times and we've had to get DCS involved and all of those forensics, give them our laptop. Give them our password and all of that. And we are not really trained to handle that type of stuff so I just try to say as soon as you see something like that – report it.

Finally, Participant S4 told a story of an incident that occurred that forced his school district to involve the Indiana State Police. He explained that a student launched an attack on the school district network, which then caused the network to crash. After a long investigation, they found out that the student had done this intentionally, but as part of an assignment for a computer science class that was being taught at the high school. In the end, the student was allowed to finish the project (actually won an award for his work) and the network was restored. The result was that the district then had to have conversations about how to address these situations moving forward.

In sum, the participants in this research study expressed concerns over several potential moral, ethical, and legal challenges. However, in reality, the participants reported that their technology usage policies were rarely, if ever challenged by students and parents. The participants in the study described the majority of these challenges as relatively minor incidents (with the exception of S4's example) and suggested that clear, open lines of communication between parents, students, and school staff were the key to resolving these challenges.

4.4: Cumulative Summary of Findings

In this chapter, the findings from this research study were presented. Key findings indicate that acceptable use policies (AUPs) are the most common type of technology usage policies in rural, K-12, public schools in Indiana. Most commonly, school districts created their technology usage policies as a committee, with consultation from an attorney after the policies were created. Furthermore, participants in this study identified four essential conditions for supporting technology usage policies in their district: (1) alignment of technology vision, (2) positive school culture, (3) availability of teacher training, and (4) digital citizenship and leadership training for students. While technology usage polices are present in all school districts in this study, technology directors believe that their effectiveness can be limited by a myriad of factors, including school culture, attitudes of the technology directors, expectations that are set (or lack thereof), educational opportunities to teach the policies, and enforcement of the policies. Another key finding from this research is the technology directors in this study expressed many more legal concerns or challenges than moral or ethical challenges. In fact, the most often mentioned topics throughout the interviews and the technology usage policies were related to legal concerns.

These findings will be further analyzed in Chapter 5, along with a presentation of implications for further study and recommendations for technology directors.

Chapter 5: Analysis And Conclusions

5.1: Introduction

The chapter that follows presents an analysis of the findings from this study in an attempt to provide recommendations for technology directors and leaders who are responsible for the creation, revision, evaluation, implementation, and enforcement of technology usage policies in rural, K-12, public, Indiana school districts with a 1:1 personalized technology initiative in place. This analysis will pull from applicable research presented in the literature review in Chapter Two to assist in explaining the findings presented in Chapter Four. Second, recommendations for technology directors and school leaders that emerged from an analysis of the findings are discussed and takeaway resources to support school district leaders are provided. Next, the chapter presents opportunities for future research that can be conducted to build upon the findings from the current research study. Finally, this chapter will conclude with an explanation of the personal significance of these findings and recommendations for the researcher, as well as all educational professionals who work with schools as they implement and enforce technology usage policies.

5.2: Analysis of Findings

Based on its findings, this study found eight new areas of understanding that will add to the existing body of literature in meaningful ways. Additionally, the analysis of these findings provides a much-needed update to the existing body of literature and provide further support to

theories that have already been identified. In each of the following sections, these eight key findings are organized according to which research question they address and are discussed in further detail below.

Research question #1. The first research question that this study sought to answer was "How did technology directors choose their type of technology usage policy and what was their purpose for selecting that type of policy?" Through conducting semi-structured interviews with the participants in this study and by doing a content analysis of each of their technology usage policy, four key findings emerged: (1) Acceptable Use Policies (AUPs) are the most common type of technology usage policy, (2) Most technology directors did not know the difference between the three main types of technology usage policies, (3) Most technology directors did not play an active role in the selection or creation of their technology usage policies, and (4) The primary purpose for implementing technology usage policies was to provide legal protection for the school district. Taken together, all four of these key findings point to a significant disconnect between policy and practice due to lack of (a) proper planning, (b) alignment to the district's mission, vision, and goals, (c) consistent enforcement of policies, and (d) access to training, resources, and support to effectively create, revise, implement, and evaluate their technology usage policies.

Finding #1: Acceptable Use Policies (AUPs) are the most common type of technology usage policy. A content analysis of the technology usage policies of each participant in this study revealed that eight school districts had Acceptable Use Policies, three had Responsible Use Policies, and zero had Empowered Use Policies in place in their districts. This finding is consistent with the body of existing literature in that while there is a wealth of information and studies that mentioned acceptable use policies, the researcher found that there were zero articles that

specifically used the term "responsible use policy" and there were zero studies that focused on empowered use policies. It follows then that acceptable use policies are the most common type of technology usage policies implemented in schools because they are the most well-known and well-researched.

The current study did find that there is more attention and focus on Responsible Use Policies than is represented in the current body of literature. In fact, while the majority of participants in this study indicated that they had an Acceptable Use Policy in place, twenty-seven percent of participants did have a Responsible Use Policy in their school districts. This is a new finding because no other study in the body of literature has examined school districts with Responsible Use Policies. Perhaps schools would be more likely to implement the more advanced kinds of technology usage policies advocated for by McLeod (2014) if they had access to more research studies and information about schools who had successfully implemented Responsible Use Policies and Empowered Use Policies, on which this student can inform. Although Responsible Use Policies and Empowered Use Policies are not widely discussed in the existing body of literature, these kinds of policies are being actively discussed by practitioners in the field of education. As innovative technology leaders continue to adapt, modify, and transform their technology usage policies to meet their schools' needs, it is likely that these kinds of advanced technology usage policies will become more common as their 1:1 technology initiative continues to grow and evolve (and as RUPs and EUPs are implemented in more school districts).

Finding #2: Most technology directors did not know the difference between the three main types of technology usage policies. Ironically, there appears to be a lack of knowledge around technology usage policies in general among technology directors, who are the individuals who are generally responsible for creating and implementing such policies. During the semi-

structured interviews with the technology directors, nine out of eleven participants admitted that they did not know the difference between the three main types of technology usage policies that the researcher was asking them about. All nine of these participants asked the researcher to actually define and explain the differences between acceptable use policies, responsible use policies, and empowered use policies. In response, the researcher used the definitions presented in Chapter One to explain these differences. From reviewing those definitions, it is evident that schools who implement responsible use policies or empowered use policies have moved beyond a legalistic purpose for their technology usage policy to embrace a culture centered around teaching and learning responsible ways to use technology. This finding is consistent with Finding #4 about the purpose that these technology usage policies serve for their school districts.

Furthermore, ten out of the eleven technology directors in this study shared that they had never even heard of the concept of an empowered use policy, and therefore had never considered implementing one in their district. As described in the section above related to acceptable use policies being the most common type of technology usage policy in these schools, the existing body of literature helps explain this finding due the sheer lack of information and scholarly research studies conducted on the topic of responsible use policies and empowered use policies. It is not surprising then that school districts are not implementing these kinds of policies in their school districts if these technology usage policies are not being presented as best practice (or even common practice) in the existing body of literature.

Finding #3: Most technology directors did not play an active role in the selection or creation of their technology usage policies. Throughout their interviews, only two participants claimed to have played an active role in shaping their technology usage policies. These two participants explained that they actually created the technology usage policies themselves, without

input from any other stakeholders. Five participants in the study said that a committee of representatives from their school district worked together to draft their technology usage policy. Although the technology directors themselves were a part of that committee, they described their role as being more passive in the creation of the policies. These five participants shared how they often felt as though they were there to make sure the technical pieces were covered, but that the rest of the committee (teachers, administrators, etc.) were involved more in creating the actual policy. Additionally, two participants said that an outside consultant or committee wrote their policies. Two other participants mentioned that their district just modified other schools' existing policies instead of creating their own. One participant explained that the administrators in his district actually wrote the policy and he is tasked with simply enforcing their policies. Interestingly, none of the eleven participants in this study expressed a deep sense of pride and ownership with regards to their policies. In fact, during the course of every single interview, the participant at some point mentioned that they didn't really have a good knowledge of the policy itself, admitting that they would actually have to read or re-read the policy themselves to know what it said about given issues.

One plausible explanation for this finding is that technology directors in rural schools may play a less active role in the development of their technology usage policies due to the simple fact that they are overwhelmed with other challenges. Participant C2 described this idea this way: "Instruction sometimes get lost in some of the other things that we have to do. My role, because I am technology, is to handle everything – from phones, to servers, to fix and repair. You know, in a rural school, you just kind of do it all." Similarly, Participant N1 also expressed feelings of being overwhelmed with too many tasks when describing discipline issues related to technology: "We used to handle each case, but wow! They just kept coming in. Now, we put

this back on the principals, which has been a big help." Participant S1 summed up this challenge by explaining that "resources are always an issue in the IT department for rural schools. So, in developing policies, it would be nice to see more resources and support out there to help small, rural schools, like ours." Certainly, it can be argued that the unique challenges that rural schools face are an important factor to consider when analyzing the role that technology directors play in developing their technology usage policies.

This finding adds to the current body of literature by describing the exact role that technology directors most often play in the development of their school district's technology usage policy. Although this is a new finding, the current body of literature can be used to help explain this finding as well. For example, both Lawson and Comber (2000) and Howard (2013) discussed at length in their work about how technology usage policies are extremely difficult to write because these policies have to be designed in such a way that takes into account competing values in order to create a balance between implementing restrictions to keep students safe and granting access to technology that actually enhances teaching and learning. Lawson and Comber (2000) also found that creating such policies requires complex and time-consuming decision-making skills. Additionally, Barter (2013) pointed out that rural school have limited resources across the board and Blackboard (2013) found that smaller school districts naturally have less human capacity to implement initiatives, both of which might explain why technology directors in rural school districts in particular might struggle with playing an active role in the development of their technology usage policies.

Finding #4: The primary purpose for implementing technology usage policies is to provide legal protection for the school district. Unanimously, all eleven participants in this study

identified legal protection and/or compliance as the primary purpose for having a technology usage policy in place. This was also supported by the sheer number of legal concerns that technology directors expressed in their interviews, along with their confidence that the technology usage policies that they had in their district would protect them from litigation. During the course of their interviews with the researcher, some of the participants also mentioned secondary purposes of their policies. More specifically, one participant's policy sought to keep kids safe while using technology. Two other participants shared that their policies were also designed to provide rules for how to use technology exclusively for educational purposes. Finally, two other participants said their technology usage policies existed to support their school district as they provided educational opportunities and resources to students.

This finding is consistent with some of the earlier literature. For example, Rafael (2014) explained that technology usage policies served more as legal documents than educational documents. Rafael (2014) also argued that technology usage policies were not necessarily designed with the goal of having students understand them completely; rather, they existed with the goal of achieving compliance. Likewise, Gable (1998) described technology usage policies as acting as mere "disclaimers of liability instead of teaching tools." Not surprisingly, Gable (1998) found that such technology usage policies were ineffective at changing student behavior and teaching students how to use technology responsibly.

While this finding is supported by a few studies, it is largely inconsistent with the majority of scholars' findings related to the most common purposes of technology usage policies in schools. Although scholars presented numerous plausible purposes of technology usage policies in schools, very few of the participants mentioned these as high-focus areas for their policies. For instance, Murphy (2012) claimed that safety is a primary concern for educational leaders and

that technology usage policies exist to keep kids safe. As noted earlier, only one participant in the current study mentioned this when describing the purpose of their technology usage policy. Likewise, Commonsense Media (2014) suggested that many schools have technology usage policies in place as a way of being compliant with CIPA in order to receive e-rate funding. Again, only one participant in this study discussed this as a primary purpose of their policy. Other scholars cited purposes of technology usage policies that were more focused on what students were doing and learning with the technology. For example, Gable (1998) asserted that technology usage policies were implemented to hold students accountable for the proper use of their technology. Similarly, Flowers and Rakes (2000) said these policies were to allow school leaders to establish a framework for creating positive school culture to support teaching and learning with technology. Only two participants in this study described such a focus on rules for how to use technology for educational purposes. Additionally, McLeod (2014) shared that schools should be using their technology usage policies in such a way that equips their students with the technology skills that they need to be successful. While two participants mentioned this secondary purpose in their interviews, a content analysis of their policies did not reflect this sentiment or purpose in actual practice. Finally, Futoran, Schofield, and Eurich-Fulcer (1995) claimed that technology usage policies were primarily used to increase communication with parents about technology usage. None of the participants in this study identified communication as a primary purpose of their technology usage policies.

In sum, the body of existing literature identified several possible purposes for implementing technology usage policies in school districts. Some of these purposes were mentioned by technology directors as secondary or tertiary purposes for their policies for their policies; how-

ever, the current study found that the primary purpose identified by technology directors was actually to provide legal protection for the school district. This finding could be explained in conjunction with Finding #3 because it is possible that the technology directors in this study were not fully aware of the intended primary purpose of the technology usage policies because they were not actively involved in creating them. Perhaps other stakeholders who were more directly involved in developing these policies would have responded differently, thereby potentially identifying some of the most common purposes of technology usage policies from the literature.

Research question #2. The second research question that this research study sought to answer was: "What are some of the essential conditions to support technology usage policies in schools and what are some of the constraints of those policies?" Through conducting semi-structured interviews with the participants in this study and by doing a content analysis of each of their technology usage policy, one key finding emerged: Technology usage policies are limited in effectiveness when they are not properly and consistently enforced. Through a description of the essential conditions and constraints of policies, Finding #5 further outlines the apparent disconnect between policy and practice in schools by suggesting that the policy enough is simply not enough to change student behavior; rather, school leaders must take care to align their practice and their technology usage policies if they want them to be meaningful and effective.

Finding #5: Technology usage policies are limited in effectiveness when the four essential conditions to support policy are not present in school districts and/or when school districts have not implemented a solid plan to mitigate the constraints of their policies. With regards to the essential conditions to support policies, over half of the participants in this study identified each of these essential conditions as being important to the success of the implementation and enforcement of their technology usage policies. More specifically, eight out of eleven

participants shared that a policy that aligned to their overall district vision was imperative and six of the eleven discussed the role of a positive school culture. Likewise, eight of the eleven participants insisted that teacher training was of critical importance, while seven participants stated that they believed that students needed digital citizenship training in order for their policies to be effective. While participants chose to focus on different elements of these essential conditions, all eleven of the participants clearly agreed with the notion that these elements were necessary in order to increase the effectiveness of their technology usage policies within their districts.

This is supported by several key studies in the body of literature. In Chapter Two, the researcher identified these four essential conditions for supporting technology usage policies that were present in the literature: (1) Alignment of Technology Vision (Kong et al., 2014; Paska, 2012); (2) Positive School Culture (Paska, 2012); (3) Availability of Teacher Training (Chapman, Loveless, & Roberts, 2000; Hudson, 2004); and (4) Digital Citizenship and Leadership Training for Students (Howard, 2013; Paska, 2012). As noted above, all four of these essential conditions were explicitly mentioned by several participants in this study. Therefore, this finding is consistent with the existing body of literature related to the essential conditions necessary to support policies.

With regards to the major constraints of technology usage policies, all eleven participants readily identified several major constraints of technology usage policies that were also presented in the existing body of literature. The most commonly cited constraint was that of the constantly changing nature of technology. In fact, all eleven participants mentioned this as a major challenge in developing a technology usage policy that would stand the test of time. While Burdette, Greer, and Woods (2013) discussed this ever-changing nature of technology, Howard (2013) and

Newman (2012) suggested that schools could combat this constraint by creating technology usage policies with flexible guidelines instead of rigid, overly-specific rules.

The second most commonly cited constraint of technology usage policies in this study was the idea that technology usage policies are difficult to write because it is hard to balance competing values, with nine out of eleven participants discussing this issue. Howard (2013) discussed this at length, arguing that schools face a tremendous amount of pressure to design high-quality learning experiences while also managing student behavior with technology. For the participants in this study that mentioned this constraint, it was clear that they were constantly torn between being too strict or too permissive, citing a feeling of being caught somewhere in between the two extremes.

Another prominent constraint that was identified by the technology directors in this study was that policy alone is not enough to change the behavior of students (eight said their policy made a difference in student behavior, two said their policies have more of an impact when combined with other programs, and three said their policies have no real impact on student behavior). This is supported in the existing body of literature because there is a clear consensus among experts in this area of study that technology usage policies are limited in terms of effectiveness and as such, face several constraints. For example, Flowers and Rakes (2000) boldly state that such policies are useless without strict enforcement and education for users. They also assert that in order for students to follow these policies, the language within the policies must be clear and appropriate; without these elements, technology usage policies are hard to read, understand, and enforce. Commonsense Media (2014) echoes this assertion by saying that policies are "limited by how they are practically enforced." Howley, Wood, and Hough (2011) argue that the biggest

problem with implementing such initiatives is a lack of professional development and funding, particularly in rural areas.

Yet another constraint that was brought up by participants in this study was the idea that technology usage policies are often developed by a committee of representatives and lack legal authority. In this study, five participants said that their technology usage policies were developed by a committee and six explained that their school districts consulted with an attorney in some way before implementing their policies. This is slightly different from the findings identified in the current body of literature, in which Crane (2004) suggests that most schools utilized a committee to develop their technology usage policies. In the current study, less than half used this method. Furthermore, the current study brought to light the practice of hiring a consultant or outside company to develop technology usage policies, which was not previously discussed in the literature. However, Crane's (2004) claim that technology usage policies are often not based on research and best practices held true in the current study as well with only two participants doing research on best practices from other school districts before developing and implementing their own technology usage policies.

Finally, seven of the eleven participants in this study mentioned the role of a negative tone or "blocking" approach, while eight of eleven felt as those ensuring student safety online posed a difficult challenge to districts as they developed and enforced their technology usage policies. Both of these constraints of technology usage policies were regularly cited throughout the literature. While Paska (2012) urged schools to resist the temptation to resort to blocking and embrace opportunities for students to learn from mistakes, Rafael (2014) suggested that schools could address both of these constraints by involving parents and the larger community in an effort to teach responsible use and keep students safe while online.

Overall, technology directors in this study shared their belief that the effectiveness of technology usage policies can be limited by a myriad of factors, including school culture, attitudes of technology directors, expectations that are set (or lack thereof), educational opportunities to teach policies, and enforcement of the policies (essential conditions and constraints). Additionally, these technology directors repeatedly acknowledged a need for digital citizenship education for students, professional development for teachers, and clear expectations for behavior while using technology from teachers and administrators.

Research question #3. The third research question that this study sought to answer was: "What are the perceptions that technology directors have about the ethical and legal implications of their technology usage policies within the context of implementing a personalized 1:1 technology initiative in their district?" Through conducting semi-structured interviews with the participants in this study and by doing a content analysis of each of their technology usage policy, three key findings emerged: (1) There appears to be a general lack of concern among technology directors related to equal access to technology, (2) Technology directors have little legal knowledge and training on best practices for addressing legal issues with technology in schools, and (3) Few challenges have been made to technology usage policies. As with the findings from the first two research questions, the findings that follow further illustrate the disconnect between policy and practice in the school districts in this study. More specifically, the following findings revealed that while technology directors were aware of some of the potential ethical, moral, and legal issues related to creating their technology usage policies, they expressed an even greater concern about how to best handle these issues once they arise within their districts. This would suggest that technology directors and other school leaders are in need of increased opportunities

for professional development around legal issues and best practices for addressing and responding to these issues in their schools. Without this increased training and support, school districts' technology policies will remain limited in their effectiveness because they lack a connection and alignment between solid policy creation and implementation.

Finding #6: There appears to be a general lack of concern among technology directors related to equal access to technology. As discussed in greater detail in Chapter Four, only five of the eleven participants shared that equal access was a significant ethical, moral, or legal concern for them and their school districts with regards to their technology usage policies. Six of the eleven participants never even mentioned the idea of equal access at all, let alone sharing any concerns related to equal access. Despite a lack of concern from the majority of technology directors in this study around the topic of equal access and technology, scholars such as Farmer (2002) have emphasized the importance of this issue by claiming that the Equal Protection Clause should also be applied to whether or not all students have equal access to the Internet and technology while at school.

While only one participant mentioned a concern about how their technology usage policies supported special education, only one participant mentioned the ADA, and only one participant mentioned supporting the needs of students at different ability levels. Burdette, Greer, and Woods (2013) suggest that equal access issues centered around the quality of special education instruction with technology is a significant issue that must be addressed. They found that in online learning environments, the quality of special education is lower than in a traditional educational classroom, IEPs often are not followed properly, and schools are not accurately defining LRE, further emphasizing the need to address issues of equal access with regards to special education students (Burdette, Greer, & Woods, 2013). Another significant issue that was discussed

in the existing body of literature was the concern over equal access to technology based on socio-economic status. While Bathon (2011) cited the National Education Policy's Center's belief that students should not be limited by their socioeconomic status in terms of accessing technology at school, only one participant in the current study even mentioned the concept of socioeconomic disparity and the resulting impact on equal access to technology resources for learning.

A final element of this finding was related to the practice of taking away student devices as a disciplinary measure. In the current research study, three participants said that they regularly took away student devices, two participants said that they never took away student devices, and six participants said that they did not have a set policy for taking away or not taking away student devices for disciplinary reasons, but instead, they handle these situations on a case-by-case basis depending on the student and the offense committed. In the literature, Futoran, Schofield, and Eurich-Fulcer (1995) noted that when students lose their privileges to use technology, educators and school leaders must consider the consequences of revoking access. In other words, they claimed that by removing access to technology, schools were also inadvertently taking away their access to the same quality and level of instructional resources and educational access (Futoran, Schofield, and Eurich-Fulcer, 1995). To further emphasize the consequences of taking away students' access to technology, Futoran, Schofield, and Eurich-Fulcer (1995) challenged educators to consider whether or not an educational substitute for technology-infused lesson and learning experiences truly exists, thereby urging them to reconsider (A) in what ways they were using technology and (B) how they could handle disciplinary issues without revoking access to technology.

Finding #7: Technology directors have little legal knowledge and training on best practices for addressing legal issues with technology in schools. Throughout the interviews, it

became clear that although technology directors had concerns about legal issues related to technology usage policies (e.g. filtering, obscene material, data privacy), they had little actual knowledge about how to best address or respond to legal issues that could arise within their school districts related to their technology usage policies. Although there seemed to be a lack of basic legal literacy, all eleven technology directors were confident that their technology usage policies were legally sound. This was based largely on the belief that because students and parents had to sign their policies, they were voluntarily agreeing to the terms and conditions listed within the policies in exchange for access to the Internet and/or technology devices. Thus, despite a lack of knowledge about how to respond, they felt that these policies would protect the district.

Additionally, this research study revealed that school districts are implementing technology usage policies as a means of preventative law to keep schools out of legal trouble instead of as educational tools to equip students and teachers with the skills they need to use technology for teaching and learning. This finding is a direct call to attorneys, consultants, and education law experts to design and offer professional development opportunities to support these school leaders with best practices related to these issues to help schools avoid legal challenges to their policies and procedures.

Finding #8: Few challenges have been made to technology usage policies. As mentioned in the previous two findings, technology directors were able to identify moral, ethical, and legal concerns, but were unable to share more than a handful of actual examples of times when their technology usage policies were challenged. One example that really illustrates this finding is that although all eleven participants discussed that bullying was a legal concern for them, the

participants in this study shared zero actual examples of bullying using technology or violations of their technology usage policies related to cyberbullying.

Three participants shared stories of legal challenges, only one participant shared an example of an ethical or moral challenge that was identified, and one participant said that the topic was too controversial in his district due to ongoing challenges for him to share any examples with the researcher. Furthermore, the participants in this study described the majority of the challenges to their policies as being minor in nature, with the most common solution being to increase and improve communication between parents, students, and school staff. For example, Participant C3 described a challenge in which a parent was concerned about the district's policies and being COPPA compliant. After conducting more research herself, the technology director was able to appropriately respond to the parent's concerns and make necessary changes to their policy and practices. Flowers and Rakes (2000) found that few technology usage policies have actually been challenged, but this study revealed that twenty-seven percent of the directors did experience some type of challenge. Although my sample was small, it yielded data that was useful in providing insight into the nature of the types of challenges to technology usage policies that were most commonly experienced by districts in this study. Furthermore, the researcher took great care to select a representative sample for this study, thereby increasing generalizability.

Geographic location. In designing this study, I was intentional about selecting participants from across the State of Indiana in order to (a) provide a representation of rural schools from across the entire State of Indiana, and (b) potentially note differences in geographical or regional perspectives that might exist related to the implementation of technology usage policies.

However, after analyzing the data, only one major difference emerged. Interestingly, the majority of technology usage policies from the participants in the Central region of Indiana were Responsible Use Policies (two out of three). While Responsible Use Policies were more commonly found in participants from the Central region, Acceptable Use Policies were much more common in participating school districts from both the Northern (three of four) and Southern (four of four) Regions. Therefore, the data does seem to indicate that geographic location did have an impact on the type of technology usage policy that was implemented in each participating school district.

Rural context. This study specifically focused on participants who were from rural schools. Although no direct conclusions can be made about the findings as being related exclusively to rural schools because no equivalent studies exist with a focus on urban and suburban contexts, the study did highlight some of the major challenges that rural schools face that might influence their ability to create and implement useful technology usage policies. As such, the rural context of the current study is significant.

Participants in the study regularly expressed the idea that as small, rural schools, they felt as though their effectiveness was limited because they were under-resourced and under-staffed. For example, participants shared that they were unable to spend time working on creating, revising, and implementing their technology usage policies because they were overwhelmed with their various job roles, responsibilities, and tasks. Issues with decreased enrollment, funding, and access to resources were also identified by participants as factors that further compound this challenge. Therefore, it seems as though rural schools might struggle to implement technology usage policies effectively because they lack access to training, support, resources, and adequate

personnel to both ensure that the essential conditions are met and that the constraints of policies are mitigated.

5.3: Recommendations for School Leaders

These findings revealed three clear, practical applications for technology directors and other school leaders who are responsible for creating, revising, implementing, enforcing, and evaluating their district's technology usage policies. A discussion of each of these recommendations is outlined below, along with a practical takeaway resource to support technology directors and school leaders as they practically implement these recommendations in their school districts.

Recommendation #1: Consider the purpose of their technology usage policy and learn about the three main types of technology usage policies (AUP, RUP, EUP) before selecting one. School leaders and technology directors should take care to make sure that the type of policy that they select matches their mission, vision, and goals of their school district. If school districts are merely implementing the policy to be legally compliant, an AUP, RUP, or EUP will work and the type of policy selected makes little difference. However, if a district truly wants to focus on using their technology usage policy to increase the quality of educational experiences and communication for all users, then an RUP or EUP would be a better choice. Furthermore, Osborne and Russo (2012) strongly urge school leaders to consider their students' age and maturity level when selecting their policies so that they can write these policies in meaningful ways that their students can practically understand and follow. Figure 5.1 below is a checklist of questions that technology directors and school leaders should consider when determining the purpose of their technology usage policies and when creating, evaluating, and revising their technology usage policies.

Figure 5.1: Questions to consider when creating, evaluating, and revising your technology usage policy

✓	**Questions to consider when creating, evaluating, and revising your technology usage policy**
	What is the purpose of your technology usage policy?
	Does this purpose align to the overall mission and vision of your school district?
	Has your policy been reviewed and updated within the last year?
	What are the strengths of your technology usage policy?
	What are the weaknesses of your technology usage policy?
	Is your policy effective in positively impacting student behavior?
	Does your district have a plan for implementing and enforcing your technology usage policy?
	Does your district have a plan to ensure that the four essential conditions to support policy are present in your district?
	What barriers (constraints) need to be overcome in order to increase the effectiveness of your policy?
	Does your district have a plan for how to mitigate these constraints?
	Does your district have a professional development plan in place to educate administrators, teachers, students, and parents about your technology usage policy?
	Has your technology usage policy been reviewed by a lawyer or legal consultant?
	Is your technology usage policy compliant with all federal laws, including CIPA and COPPA?
	Does your policy have provisions for meeting the specific needs of students with disabilities?
	Does your technology usage policy ensure equal access to technology for all students?

Recommendation #2: Develop a district plan to ensure that the four essential conditions to support policy are present in your district and to mitigate the constraints of your policy. Many of the technology directors in this study were not actively involved in developing their technology usage policies, but research indicates that they should be. Designing purposeful

policies and ensuring that the essential conditions to support policies are in place does not just automatically happen in school districts - it takes a lot of intentional work and planning. The technology usage policy itself is simply not enough to change behavior; therefore, school districts need a detailed plan for the teaching of responsible behavior with technology and the consistent enforcement of the policy among school leaders and teachers. As such, school leaders and technology directors should consider assembling a guiding coalition comprised of stakeholders from across the school district (parents, teachers, students, and administrators) to increase the efficiency of their technology usage policies by leveraging buy-in from all levels. This guiding coalition should regularly work together to accomplish the following tasks: (1) Create a mission and vision for the district, (2) Align their technology usage policy to this mission and vision, (3) Focus on ways to create a positive school culture that supports teaching and learning with technology that makes all users feel supported; (4) Identify barriers to learning with technology and remove them whenever possible; (5) Develop a professional development plan to support teachers as they use technology for teaching and learning; (6) Create and implement a comprehensive scope and sequence for digital citizenship for students across the school district; (7) Work to identify opportunities for students to gain experience to develop their skills as digital leaders and to keep them safe while using technology; (8) Regularly review and update the district's technology usage policy to combat the constraint that technology is ever-changing; and (9) Develop a comprehensive strategic plan to address remaining constraints of technology usage policies. In sum, a guiding coalition and regular strategic planning could be used as a strategy to get technology directors more actively involved in the process of designing purposeful technology usage policies, while also helping to ensure that the school district has the four essential conditions to support policies in place, while also having a plan to address the constraints of their policies as

well. Figure 5.2 below serves as a worksheet that technology directors and school leaders can use to create an implementation plan with action items for ensuring that the essential conditions to support the policy are present within their school district while making sure that the constraints of policies outlined in this study are mitigated as well. Ideally, this planning document would be a collaborative space for all members of the guiding coalition to contribute their ideas so that their technology usage policies are as effective as possible.

Figure 5.2: Technology usage policies planning worksheet: Essential conditions and constraints of policies

Essential Conditions to Support Policies	
Essential Condition	Plan for Implementation and Action Items
Alignment of Vision	•
Positive School Culture	•
Availability of Teacher Training	•
Digital Citizenship Training for Students	•

	• • •

Constraints of Policies	
Constraint of Policies	Plan for Implementation and Action Items
Developed by a committee with little legal authority	• • • • • •
Technology is constantly changing	• • • • •
Policy alone is not enough to change student behavior	• • • • •
Negative tone and/or blocking mentality	• • • • •
Ensuring student safety online is difficult	• • • •

	•
Hard to write to balance competing values	• • • • •

Recommendation #3: Consult with an attorney and seek out professional development opportunities related to potential legal issues that technology directors face. This study clearly revealed that technology directors' biggest concerns related to technology usage policies were related to legal issues. While all of the technology directors in this study felt confident that their technology usage policies would hold up in court, these participants seemed to have very little actual knowledge about the law related to using technology for teaching and learning. As such, it is recommended that school leaders and technology directors always consult their school attorney for specific guidance and to make sure that their existing policies are compliant with all local, state, and federal laws. Additionally, school leaders and technology directors should consider conducting their own research on issues that arise within their district and be as informed as they can be by staying current with legal issues that other schools around the country are facing. Leaders should also develop policies and procedures to strengthen their current technology usage policies with a specific focus on ensuring that students with disabilities are being provided the appropriate modifications, accommodations, and related services in classrooms with access to technology (Burdette, Greer, & Woods, 2013). More specifically, technology directors and school leaders should seek legal advice on how to practically make sure that

the needs of students with disabilities are being met, aside from the inclusion of a simple statement in their technology usage policy. For example, school leaders should be concerned with how Individualized Educational Plans (IEPs) are being followed, how Least Restrictive Environment is defined, and how the quality of teaching is enhanced in an online learning environment for students with disabilities. They should continue to monitor access issues for *all* students. Figure 5.3 provides answers to several of the most common moral, ethical, and legal issues with regards to technology usage policies that were discussed throughout this study. This FAQ document is intended to provide guidance and to help support technology directors, school leaders, teachers, and parents as they work together to develop solutions to these issues.

Figure 5.3: FAQs: Moral, ethical, and legal issues with technology usage policies

Questions	Answers
Who should be responsible for protecting students from inappropriate content?	In order to best protect students from inappropriate content, schools and parents should work together to protect students in and out of school from inappropriate content.
What can schools do to protect students from inappropriate content?	In order to receive e-rate funding, schools must have an Internet Safety Policy in place (ex. Technology Usage Policy) and must take appropriate measures to protect students from harmful content by using filtering tools.
What can parents do to protect students from inappropriate content?	Parents can have a big impact by partnering with their child's school. Additionally, parents can help by monitoring their child when using a device and/or accessing the internet at home. Having regular conversations with children and setting clear expectations for use are also important ways that parents can help.
Who should be responsible for teaching students proper use of technology?	In order to ensure that students learn how to properly use technology, schools and parents should work together to educate students and set clear and consistent expectations for technology use both at school and at home.
What can schools do to teach students proper use of technology?	Schools can help teach students about proper use of technology by intentionally integrating digital citizenship education into the school curriculum for all students. In addition to explicitly teaching students

	about proper use of technology, schools can increase their effectiveness by holding parent nights about their technology usage policy, regularly communicating with parents and providing them with resources to have conversations with their students about proper use, and consistently enforcing rules and expectations outlined in the technology usage policy itself.
What can parents do to teach students proper use of technology?	Parents can help teach their child about proper use of technology by setting, modeling, and discussing expectations for proper use of technology. Furthermore, parents are encouraged to communicate regularly with their child's school and report improper use of technology to school officials immediately.
What can schools do to ensure that all students have equal access to technology resources?	Schools should consult with an attorney to ensure that their technology usage policy is compliant with federal laws that impact students with disabilities such as ADA and IDEA. Schools should also consult with a legal professional to obtain legal training and education for staff about how to practically address equal access issues that arise, with particular attention to their practice related to taking away devices as punishment for inappropriate behavior.
What is CIPA?	CIPA is a Federal law that was enacted by Congress to address concerns about the potential for children to access inappropriate content via the Internet. CIPA requires that schools create Internet Safety Policies and have filtering solutions in place to protect students from harmful content.
What does this mean for schools?	In order to receive e-rate funding, schools must be compliant with CIPA.
What is COPPA?	COPPA is a Federal law that was designed to protect the privacy rights of students under the age of thirteen.
What does this mean for schools?	Schools should verify that third-party vendors that they use for educational purposes are COPPA compliant. Schools should also inform parents of their rights related to student information and should obtain "verifiable consent" from parents before sharing personal information about students under the age of thirteen.

5.4: Implications for Further Study

The research in this dissertation focused on technology directors' perceptions about technology usage policies, essential conditions to support policies, constraints of policies, and their

potential moral, ethical, and legal implications. This is a growing area of research with many opportunities for further study. For all of its findings, this research study only scratched the surface of addressing and studying this topic. Much is left to be learned about technology usage policies. Based on this study's findings, the following five opportunities for future research exist:

Opportunity #1: Technology usage policies and student with disabilities. Throughout this study, it was evident that technology directors had given very little thought to how their technology usage policies might impact students with disabilities. Likewise, these leaders seemed to have very little practical and legal knowledge about how their policies should be designed to protect and meet the unique needs of students with disabilities.

Opportunity #2: Other stakeholders' perspectives of technology usage policies. This study focused on technology directors' perspectives of technology usage policies. However, there is still much to be learned from the viewpoint of other key stakeholders who are affected by technology usage policies such as teachers, administrators, school board members, students, and parents. The existing body of literature is currently lacking research related to each of these groups' viewpoints and insights regarding technology usage policies.

Opportunity #3: Technology usage policies within the context of urban schools. This study chose to focus on issues related to technology usage policies within the context of rural school districts. It would be interesting for this study to be replicated within the context of urban schools and then to study a comparison between the findings of both studies to identify differences and similarities that might exist.

Opportunity #4: Research specifically on Responsible Use Policies and Empowered Use Policies. Although there are studies that are focused exclusively on Acceptable Use Policies, there is currently no peer-reviewed, scholarly research dedicated to a study of either Responsible

Use Policies or Empowered Use Policies. Such an in-depth analysis of these types of policies would greatly help technology directors and other school leaders as they make decisions about the kind of technology usage policy that they want to implement in their school districts.

Opportunity #5: Legal training and professional development in rural schools. Throughout their interviews, several technology directors mentioned the unique challenges that they face related to a lack of time, human capacity, and resources. Although they did not specifically mention having fewer opportunities for legal training and professional development than urban schools, this is a topic worth exploring in more detail in future research to see whether or not such a discrepancy exists between the urban and rural schools.

5.5: Significance and Conclusion

As noted in this study's introduction, personalized 1:1 technology initiatives are growing in popularity within the State of Indiana. As our systems of education continue to focus more on tying funding with academic performance, there is more pressure than ever on schools to prove the effectiveness of any initiatives that the implement. This research study was designed specifically around one element that is common in all 1:1 personalized technology initiatives: technology usage policies. As explained throughout this study, technology usage policies such as Acceptable Use Policies (AUPs), Responsible Use Policies (RUPs), and Empowered Use Policies (EUPs) play a critical role in organizing these 1:1 technology initiatives in school districts. Furthermore, the researcher chose to focus on rural school districts in this dissertation in order to add to the existing body of literature about technology in rural schools and to shed light on the unique challenges that these school districts face, as illustrated through an examination of their technology usage policies.

In addition to being timely and relevant for technology directors and other school leaders across the State of Indiana, this research study is also personally significant to me due to my role as an expert in the field of education who consults with schools on a daily basis related to best practices for teaching and learning with technology. Through my work as the Director of Innovative Learning for Five-Star Technology Solutions, the schools that I work with will benefit greatly from the findings of this research study as we work together to create, revise, implement, enforce, and evaluate their technology usage policies in their school districts and look for ways to ensure that the four essential conditions for supporting technology usage policies are in place, while also developing strategies for mitigating the constraints of their chosen technology usage policies. Furthermore, this study has significance for other professionals who consult with schools related to technology integration and technology usage policies in a role similar to mine. As mentioned in Chapter One, this study will be especially useful as I support my clients who are located in rural areas by helping me better understand the unique challenges that they face in implementing changes, initiatives, and policies like those described throughout this dissertation. It is my hope that they too can follow and implement the recommendations listed previously within this chapter.

The findings from this research study and the recommendations for technology directors and school leaders presented in this dissertation are intended to be helpful in supporting technology directors as they implement, revise, enforce, and evaluate their technology usage policies within their district. This study took the first step toward that end, but it is only a start. If we want to change student behavior and teach students how to not just be good digital citizens, but

digital leaders, we need to better understand the constraints and limitations of the technology usage policies that we implement and recognize the vital role that digital citizenship education and consistent enforcement play in helping us practically achieve this goal.

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INDIANA UNIVERSITY, Bloomington, IN
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LICENSES AND CERTIFICATIONS
Indiana Superintendent's License (P-12)

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PROFESSIONAL EXPERIENCE
FIVE-STAR TECHNOLOGY SOLUTIONS, Sellersburg, IN
Director of Innovative Learning, September 2015 – PRESENT
Consult with school districts in Indiana about how to integrate technology into classrooms in meaningful ways and lead change. Lead guiding coalitions through the process of strategic planning, collecting/analyzing data, setting goals, creating professional learning plans, and providing professional development, support, and resources to teachers. Travel across the country to train teachers on Google's CS First and Google's Applied Digital Skills.

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#INeLearn Twitter Chat Moderator, January 2014 – PRESENT
Plan for and design questions for #INeLearn Twitter Chats (first Thursday of every month) related to coaching. Ask questions and interact with participants, facilitating collaboration and discussion.

METROPOLITAN SCHOOL DISTRICT OF MOUNT VERNON, Mount Vernon, IN
Technology Integration Specialist, June 2013 – September 2015, *Teacher's Assistant*, 2010-2011
Worked with teachers to tie technology closer to the curriculum; Provided teachers with support necessary to try new teaching techniques and tools; Enhanced teaching and learning experiences of all members of the organization; Provided leadership, support, and professional development

to improve the school's use of technology for instruction, communication, and student achievement. Coordinated and managed the Special Education Opportunity Center; Worked with Teachers of Record to develop, design, and implement an educational program for at-risk students in credit recovery or who were in need of homebound services; Utilized online digital curriculum such as APEX Learning for instruction and delivery of content.

INDIANA UNIVERSITY-PURDUE UNIVERSITY INDIANAPOLIS, Indianapolis, IN
Adjunct Instructor, 2012-2013
Developed online course curriculum and syllabus; Hosted "Evolving Education" Cyber Summit on an annual basis; Taught courses in the Masters in Education with a Focus on Technology Program through IUPUI's School of Education; Taught W515: Technology Leadership and W550: Research in Instructional Design.

EVANSVILLE-VANDERBURGH SCHOOL CORPORATION, Evansville, IN
Middle School Social Studies Teacher, October 2011-May 2013
Taught 7th Grade World History and 8th Grade U.S. History; Created my own Digital Curriculum; Planned all instructional materials and provided differentiated instruction for all students.

IVY TECH COMMUNITY COLLEGE, Evansville, IN
Special Projects Coordinator, 2010-2011, *Grants Specialist*, 2012-2013, *Adjunct Instructor*, 2014. Supervised the development, delivery, and evaluation of classes provided for dislocated workers; Developed and maintained working relationships with college staff, faculty, students, and WorkOne Staff; Recruited, hired, managed, and evaluated adjunct faculty; Managed data and prepared reports for routine grant requirements, revenue and expense functions, etc.; Developed and delivers support activities for dislocated workers; Represented Ivy Tech Community College at community functions. Maintained the RAD Participant Tracking Database for the entire Ivy Tech Community College Network (9 Regions); Directly assisted the Project Director during the critical grant wrap-up period and audit; Represented Ivy Tech Community College on three separate occasions before the Department of Labor in Washington, D.C.; Supervised 9 Regional Ivy Tech Community College Project Coordinators with regards to grant reporting and implementation. Taught basic-level computer courses, provided hands-on, face-to-face classroom instruction, and administered grades.

AWARDS/DISTINCTIONS
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Gough-McKeown, M., Seitz, K., & Eckes, S. (2015). Pregnant and parenting students. *Principal Leadership*, 58-59.

Kaiser, M. M., Seitz, K. M., & Walters, E. A. (2014). Transgender Policy: What Is Fair for All Students? *Journal of Cases in Educational Leadership*, *17*(1), 3–16.

PRESENTATIONS AT ACADEMIC CONFERENCES

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Cub Scout Den Leader (Webelos), 2017-CURRENT

Girl Scout Co-Leader (Juniors), 2016-CURRENT

Life Group Leader/High School Mentor (Eastside Christian Church), 2018- CURRENT

Little Squad (3-5 Year Olds Class) Leader (Eastside Christian Church), 2017-CURRENT